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FARM MESSAGE ANALYSIS

New Price Support Plan Rests on Production Cost

By JOHN CIPPERLY, Croplife Washington Correspondent

WASHINGTON — President Eisenhower sent a tough farm message to Congress Jan. 29, a message in which the administration places the farm problem squarely in the laps of the Democratic majority. He demanded that price supports be lowered substantially and drastically for the commodities on which there are mandatory supports. In effect, the presidential message took the heat off Ezra Taft Benson, secretary of agriculture, and put it firmly on the White House itself.

Out of 250 farm commodities produced in the U.S., the law requires that prices of 12 of them be supported at prescribed minimum levels. It is this requirement, together with the level of required support, that has created the farm surplus problems, the President asserted.

Three of the 12 mandatory products—wheat, corn, cotton—account for about 85% of the federal inventory of price-supported commodities though they produce only 20% of the total cash farm income. The price support and production control program has not worked, the President averred.

Mr. Eisenhower urged a position advocated by the American Farm Bureau that price support levels be geared to a percentage price support level of the last three-year national average price for all acreage allotment crops. This position overrides the present law which was passed by the last Congress in regard to cotton and corn, but the U.S. Department of Agriculture and the White House are sighting their guns on wheat, primarily.

The heart of the White House program is basically this: It wants the U.S. price support level dropped to the cost of production of those crops. This is known to be the lowest in the world.

Secretary Benson is not anxious to take these price support levels down sharply next year. International problems are involved.

But the message carried the significance of what will be in the cards if the Democratic majority in both chambers can accept the Benson proposals which were in a memorandum attached to the President's message.

It is doubted that Congress will accept them, despite the President's charges that the present program is benefiting only a few farmers, has failed to control surplus production, is excessively expensive and that to continue the program in its present form would be "intolerable."

Here is the arithmetic of the White House proposal as far as new price support levels are concerned:

1. The government would support the price of farm commodities at the discretion of the secretary of agriculture at between 75 and 90% of the

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U.S. Loans Greece $12 Million for Fertilizer Plant

WASHINGTON—Dempster McIntosh, managing director of the Development Loan Fund, has signed an agreement by which the U.S. will lend $12,000,000 to the Kingdom of Greece to assist in establishing a nitrogenous fertilizer plant. The signing completed action on a transaction approved and announced by the Development Loan Fund last June.

The fertilizer plant will utilize lignite deposits in a little-developed portion of northern Greece. The same lignite deposits will furnish fuel for a thermal power plant being built by the Public Service Corporation of Greece, which will provide power for the fertilizer plant.

Capacity of the fertilizer plant is estimated at 278 tons per day of fixed nitrogen, or 300,000 tons per year of finished nitrogen-based fertilizers. At present, virtually all of Greece's fixed nitrogen has to be imported.

The loan is the first to be made by DLF to Greece. It will be repayable in Greek currency over a period of 12 years, and it will provide more than 40% of the foreign exchange cost of the fertilizer plant. The bulk of the remaining foreign exchange financing is to be obtained from European credit sources.

USDA Reports Drop in Corn Borer Numbers

But 58 Additional Counties Infested For the First Time

—See Map on Page 20—

WASHINGTON — A marked decrease in the average abundance of European corn borers found last fall throughout the U.S., as compared with corn borer numbers found in the fall of 1957, was noted in figures released Jan. 30 by the U.S. Department of Agriculture. Fifty eight additional counties were reported infested for the first time in 1958, according to plant pest control officials of the USDA's Agricultural Research Service.

The abundance survey was made in cooperation with agricultural agencies in 25 states where population counts were made on field corn to determine the number of live borers present.

Based on comparable districts surveyed, the average number of borers per 100 plants decreased from 162 in 1957, to 94 in 1958. In 1956 the count was 112. Borers destroyed almost 181 million bushels of corn grown for grain in 1957. The loss to farmers was about $158.8 million. Estimates of losses during 1958 will be released at a later date.

In 1958, borers infested 24 additional counties in Arkansas, 15 in Alabama, 6 in Georgia, 4 in West Virginia, 2 each in North Carolina and Missouri and 5 parishes in Louisiana. The total of 58 compares with 29 additional counties in 1957.

Decreases were most notable in Iowa, Missouri and South Dakota in the central states, where the number

(Turn to CORN BORER, page 20)

'Basic and Applied Research Equally Important to Program,' Speaker Tells Arizona Group

TUCSON, ARIZ. — Speaking on "The Relative Importance of Basic and Applied Agricultural Research," Dr. Richard B. Bahme, western regional director, National Plant Food Institute, stated that both are interdependent and equally important with a balanced program being a requirement. He told this to participants of the 2nd Annual Arizona Fertilizer Conference at the University of Arizona here.

Basic or fundamental research is to improve the soundness and orderly arrangement within our sphere of knowledge, Dr. Bahme said, and applied research involves determining the best combination of growth factors for a particular crop and field—putting basic research to work on the farm.

More rapid acceptance of technology by western farmers, said Dr. Bahme, increased production 250% since 1900 compared to the U.S. average of 50%. Capital and labor savings have resulted in lower production costs. The reward of applied research and technology, then, is in increased yields, lower production costs, greater net profits and finally better living.

Agricultural extension workers and farm chemical dealers and salesmen are in closest contact with farmers. They must work closely together using the best educational information and techniques available, he said.

Dr. T. C. Tucker, department of agricultural chemistry and soils, reported on current soil fertility investigations along with cooperating experiment station research workers. A phosphorus response was obtained on cotton at two locations using 50

(Turn to ARIZONA MEETING, page 8)

New C-I-L Plants Now in Operation

TORONTO—Completion of its current program of modernization in its Ontario fertilizer plants has been announced by Canadian Industries Limited.

L. V. Clegg, production manager of C-I-L's agricultural chemicals division, said that after a brief period of start-up operations, two new granular fertilizer plants recently completed at Hamilton and Ingersoll are now in commercial production. A third plant at Chatham, Ont. went "on stream" last June. Granular fertilizer manufactured at these plants will be marketed under the name "Super Flow."

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Collier to Expand Capacity of Brea Ammonia Plant

LOS ANGELES — Collier Carbon and Chemical Corp. has announced that it is expanding the capacity of its Brea, Cal. ammonia plant by 20%.

Robt. T. Collier, president, said that "the investment can be counted as a vote of confidence in the growth of western agriculture and foreign markets, even in the face of stiff competition."

C. F. Braun & Co. engineered the plant changes. Ehrhart and Associates, Inc., is the contractor. Completion is scheduled for midyear.

PRODUCTION GOALS — Gordon Kunze, young Jerauld County farmer, points out his farm location on a new wall chart of South Dakota production goals introduced at the ninth annual Fertilizer and Soil Management Short Course held at South Dakota State College Jan. 29. The topic was discussed by Edward J. Williamson, right, extension service soils specialist. It shows potential yields in each area of the state which farmers could reach by using nine approved production practices. Looking on is Dr. L. O. Fine, head of the agronomy department which sponsored the Short Course, and chairman of the day's program.

South Dakota Dealers Make Plans to Form Association

BROOKINGS, S. D.—South Dakota fertilizer dealers made tentative plans to organize a fertilizer dealers association during the ninth annual fertilizer and soil management short course here recently. A meeting to set up a formal organization has been scheduled for Feb. 23, at Brookings. Meeting time will be 1 p.m.

Serving as temporary officers are two South Dakota State College agronomists, Leo F. Puhr and Rodney Dodge. Mr. Puhr is chairman, and Mr. Dodge is secretary. They will serve until formal organization is completed. College personnel will not be eligible for membership.

Some 270 persons at the short course heard Gordon Kunze, a young Jerauld County farmer; C. J. Chapman, veteran extension soils specialist at the University of Wisconsin, and South Dakota State College researchers tell of fertilizer's ability to increase crop yields.

In addition, Edward J. Williamson, extension soil specialist, told about South Dakota production goals—a way farmers can reach potential yields in their area by using approved soil management practices. Lloyd Davis, assistant extension soil specialist, described a proposed fertilizer dealer-county agent demonstration program for South Dakota.

Dr. O. G. Bentley, dean of the Division of Agriculture, spoke briefly, saying: "If we're going to get maximum utilization and maximum efficiency out of the genetic potentials of our crops, we'll have to think about the nutrients that go into that plant." He said that Nebraska is using 20 times as much nitrogen as South Dakota and North Dakota is using twice as much.

A panel of commercial fertilizer dealers, moderated by Paul Carson, South Dakota State College agronomist, discussed methods of fertilizer application. Appearing on the panel were Kaspar Peter, Omaha, Phillips Chemical Co.; J. D. Campbell, Omaha, Olin Mathiesen Chemical Corp.; D. W. Simonsen, Quimby, Iowa, Simonsen Manufacturing Co., and M. Marcour, Sioux Falls, Summers Fertilizer Co.

Dr. L. O. Fine, head of the agronomy department, sponsor of the program, served as chairman. Thirteen companies displayed fertilizer equipment in the Agronomy Seed House.

Mr. Kunze, a South Dakota State College graduate who farms with his father, Otto Kunze, near Alpena, S.D., told how fertilizer last year increased his yields 39.6 bu. and his net return by $35 an acre. He said about a fourth of his operating expenses went for fertilizer. A Brookings County farmer, Winston Ullman, also told about his 10 years experience in farming. Mr. Ullman is also a teacher in the college economics department.

Dr. Chapman told the evening banquet audience that "nitrogen fertilizer has lifted the horizon of crop production in South Dakota." He said of the combination of nitrogen minerals and water necessary for efficient crop production, only water is lacking in South Dakota. "And that will come with irrigation," he added.

Fred Shubeck, Leo Puhr and B. L. Brage reported on college experiments for 1958 in the use of commercial fertilizer and green manure crops. Mr. Puhr reported on corn fertilizing and Mr. Brage on small grain fertilizing.

Mr. Shubeck, in comparing legume and commercial sources of crop nitrogen in relation to the water supply, showed striking figures on how the preceding crop can affect subsoil moisture. Moisture at the two to four foot levels was reduced 4% when alfalfa was the preceding crop as compared to oats as the preceding crop. He said this 4% depletion amounts to 40,000 gallons an acre—enough to supply a town of 1,200 people for a day.

Dow Investment

NEW YORK—The Dow Chemical Co., Midland, Mich., has invested $2,300,000 in Catalin Corporation of America here by purchasing a subordinated convertible note of Catalin, according to a joint statement made by the two firms. Catalin is a producer of chemicals, resins and plastics with plants at Fords, N.J., Calumet City, Ill. and Thomasville, N.C.

Montana Meeting

GREAT FALLS, MONT. — The fourth annual Montana State Fertilizer Dealer School will be held Feb. 16-17 at the Civic Center here. Sponsors are Montana State College and the Montana Plant Food Assn.

SEARCH FOR WEEDS

DAVIS, CAL.—Jack Major, assistant professor of botany at the University of California, Davis, is leaving for Mediterranean countries to search for certain southern European weeds and for insects which prevent them from becoming pests. His search will be aimed particularly at Medusa head, puncture vine and weedy thistles, all of which are found in California. Biological control experts from the university will follow up Mr. Major's work during the next two or three years.

Plans for California Conference Revealed

SAN MARINO, CAL.—The soil improvement committee of the California Fertilizer Assn. has announced plans for the seventh annual California Fertilizer Conference to be held June 29-30 on the campus of the University of California, Davis. Some 300 people interested in plant nutrition are expected to attend this year's program, according to J. H. Nelson and Earl R. Mog, both of Stockton, co-chairmen of the conference.

This annual conference provides a forum for dissemination of information concerning fertilizer research and is pointed to growers, commercial laboratory personnel, cannery and other agricultural processing field men and agronomists, research and educational personnel of the University of California and the state colleges, the Soil Conservation Service, and representatives of the fertilizer industry.

Fertilizer placement, one of the most prominent and important aspects of plant nutrition in recent years will receive major emphasis on this year's program. In addition, considerable attention will be given to recent developments in tree and vine fruit nutrition according to the committee, which urges all persons concerned with these aspects of plant nutrition to attend, the co-chairmen said.

On June 28, the Soil Improvement Committee will host an annual joint dinner with the University of California and state college fertilizer committees, which consist of personnel concerned with plant nutrition in their respective departments. Each year at this time, these groups meet with members of the fertilizer industry to discuss problems of mutual interest.

The conference will convene at 9 a.m. on the Davis campus for a morning program of formal papers on fertilizer use.

An outdoors luncheon will be featured and, following this, delegates will board buses for a field tour of various research projects being conducted on the experiment station.

The annual conference banquet, featuring a prominent personality in the agricultural field will be held that evening in Sacramento.

On June 30, two panels will be featured—one on fertilizer placement, and the other on tree and vine fruit nutrition. The audience will be divided into separate auditoriums and the panel will rotate.

All growers and others interested in soil fertility and plant nutrition are invited. Further information, including programs when they have been printed, can be had upon application to the California Fertilizer Assn., 475 Huntington Drive, San Marino 9, Cal.

Adkins-Phelps Opens New Arkansas Outlet

WEST MEMPHIS, ARK.—A complete farm store has been opened here by the Adkins-Phelps Seed Co. of North Little Rock. The store will carry an extensive line of field seeds, farm chemicals, fertilizers, sprayers and dusters, garden seeds, dairy supplies, weed and brush killers, seed disinfectants, cotton poison and defoliants, plus numerous other items related to farm, garden and lawn needs.

Manager of the new store is R. G. Friday, who has had 12 years experience in buying and selling of field seeds. He is a graduate of Mississippi State University, where he received a degree in agriculture.

PASTURE SCHOOL SET

BLACKSBURG, VA.—Virginia Polytechnic Institute here announced that the 8th annual Middleburg Pasture School will be held on Feb. 18-19, at the Community Center in Middleburg, Va.

Monsanto to Build Maleic Anhydride Plant in England

Monsanto Chemicals Ltd., London, England, will erect a 15,000,000 lb. per year maleic anhydride plant at Newport, Monmouthshire, England. The plant will be the largest to be built outside of the U.S., a spokesman said.

Scientific Design Co., Inc., New York City, and SD affiliates will undertake the complete turnkey project, using an SD process. The plant is scheduled for completion the latter half of 1960.

The new maleic anhydride facility, together with existing facilities, will enable the company to supply the future demands of British industry, and also fulfill the consumption requirements of the Commonwealth and other export markets, it was reported.

Maleic anhydride is an important organic chemical used in the manufacture of alkyd resins, polyester resins, fungicides, plasticizers, and numerous specialty chemicals.

The SD process produces maleic anhydride by continuous, catalytic, vapor-phase air oxidation of benzene. A patented catalyst and special design features are incorporated in the highly efficient process.

California Weed Group Elects New Officers

SANTA BARBARA, CAL. — The California Weed Conference, in its eleventh annual meeting at Santa Barbara, Jan. 21, named C. Bruce Wade of Redding as its new president. Mr. Wade, Shasta County agricultural commissioner, succeeds J. T. Vedder of Hanford, a representative of Sunland Industries, Inc., Fresno.

Other new officers are Dr. Boysie E. Day, University of California plant physiologist, Riverside, vice president; W. B. McHenry, University of California weed specialist, Davis, secretary, and Stanley W. Strew, Colloidal Products Corp., Sausalito, treasurer.

The three day meeting, and the second to be held at Santa Barbara, set a new conference record here of 400 registrations.

The conference will meet in Sacramento, Jan. 19-21, 1960; Fresno, Jan. 24-26, 1961; San Jose, Jan. 23-25, 1962, and Santa Barbara, Jan. 22-24, 1963.

Alfalfa Weevil Poses Threat in Massachusetts

BOSTON—Discovery of an insect pest new to Massachusetts—the alfalfa weevil—shows that farmers could lose up to one third of their forage crop, a graduate student at the University of Massachusetts reported.

"In areas of heavy infestation from 50% to total loss of the earlier cutting is possible," said Robert J. Lavigne. He discovered the first larvae of the insect found in Massachusetts at Ashley Falls in June of 1957. Field surveys found the pest only in Berkshire and Hampden counties then, but in 1958, the alfalfa weevil was found in every county in the state with exception of off-shore islands.

DEAN OF AGRICULTURE

BERKELEY, CAL.—Daniel G. Aldrich, Jr., chairman of the department of Soils and Plant Nutrition on both the Davis and Berkeley campuses of the University of California, has been named university dean of agriculture with statewide responsibilities. Under his jurisdiction will be the agricultural experiment stations, and the agricultural extension service. He replaces H. R. Wellman in this respect.

Keith Sime

NEW DIRECTOR—Roy E. Miller, president of the Miller Products Co., Portland, Ore., announced the appointment of Keith Sime to the board of directors and his election as vice president in charge of sales effective Jan. 15. Mr. Sime joined Miller after having served for 16 years as northwest district manager for Chipman Chemical Co. Mr. Sime is active in the Western Agricultural Chemicals Assn. and is presently serving on the Northwest Legislative Committee. Prior to entering the manufacturing and sales field of agriculture Mr. Sime, a graduate of Montana State College, was with the Montana extension service for eight years, spending four years each as county agent in Baker and Billings, Mont. A. J. (Jim) Overton has been appointed assistant sales manager in charge of advertising and sales promotion. Mr. Overton has been with the company for seven years prior to which he was active in eastern Washington and Idaho in the seed business.

"Low Cost, High Quality" Is Cotton Meeting Theme

PHOENIX, ARIZ. — The program for the Western Cotton Production Conference here, March 3-4, will be built around the theme, "lowest costs, highest quality in 1959."

The conference is being sponsored by the National Cotton Council and the Southwest Five-State Cotton Growers Assn. The Arizona Cotton Growers Assn. is local host for the meeting which is expected to draw some 500 farmers, educators, research workers and others interested in cotton production. Headquarters will be the Hotel Westward Ho.

Setting the stage for the program will be Dr. Richard A. Harvill, president of the University of Arizona, Tucson. Dr. Harvill will speak on western cotton's opportunities.

The program then will move into both research and practical problems in growing cotton in the western states.

Topics to be covered include increasing yields through better planting seed processes, chemicals for producing hybrids and controlling fruiting, new irrigation information on cotton, new information on plant foods for cotton, new developments in insect control, a good insect control program, weed control, and various facets of improving and maintaining cotton quality.

During the afternoon of the second day of the conference, visitors will tour the Arizona Cotton Research Center at Tempe.

KENTUCKY FERTILIZER SALES

LEXINGTON, KY. — Fertilizer sales in Kentucky during November, 1958, amounted to 7,210 tons or 2,724 tons more than November, 1957, reported the Department of Feed & Fertilizer, Kentucky Agricultural Experiment Station here.

California Nematologist Starts "Hoplo" Hunt

BERKELEY, CAL. — S. A. Sher, nematologist at the University of California, Riverside, is embarking on a two-year job of detecting nematodes masquerading under aliases in various countries.

With a $5,000 grant from the National Science Foundation, Mr. Sher will compare thousands of specimens and try to sort them out according to the international rules of zoological nomenclature.

The tiny soil worms are from a subfamily called Hoplolaiminae. First described from South America in 1905, the initial specimen disappeared from sight. Fifty years later it turned up in a Budapest museum.

"Hoplo" nematodes are being reported at a rate of about two a year, says Mr. Sher. Identical nematodes are receiving a variety of names. Although a nematode by any other name is just as dangerous, scientists can best fight them when they know what they're fighting.

To straighten out the confusion, Mr. Sher will confer with experts in Hungary, Holland and England as well as those on the university's Berkeley campus.

Specimens gathered during his travels will be added to the over 8,000 "hoplos" he has already collected from all over the world.

CIRCULAR AVAILABLE

STATE COLLEGE, N.M.—A circular entitled "Fertilizing Established Lawns," and written by W. J. Wiltbank, extension horticulturist of New Mexico State University, is available for circulation. Copies of Circular 295, which discusses all phases of lawn fertilization, can be obtained by writing to the Department of Information, New Mexico State University of Agriculture, Engineering and Science, Box 757, State College, N.M.

New Jersey Corn Contest Champion Announced

TRENTON, N.J. — New Jersey's new corn growing champion is George M. Gass of Augusta.

Mr. Gass grew 186.5 bu. an acre, the highest yield ever recorded in the history of the New Jersey Hundred Bushel Corn Club, according to Dr. John L. Gerwig, crops specialist with the extension service, Rutgers University.

Second in the statewide contest was R. E. Linburn of Stockton, with 172.1 bu. an acre, and third was Charles Pratschler of Montague Township who harvested 159.2 bu. an acre. Mr. Pratschler finished second in 1957.

Robert Thomas of Hackettstown won the Future Farmers of America division with 162.3 bu. an acre, and Robert Barkman, Long Valley, was tops in the 4-H competition with a yield of 155.9 bu. an acre.

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Arizona Group in All-Out Pink Bollworm Fight

TUCSON, ARIZ. — The pink bollworm, a nuisance previously little known to Arizona's cotton growers, now poses a serious threat to the state's cotton industry. As an emergency measure against this menace, the Arizona Cotton Growers Assn. has pledged $1 million in 1959 to stamp out the pink bollworm.

The group will also ask $1 million in matching funds from the state legislature, as well as $2 million from the federal government.

B. C. Rhodes, secretary-treasurer of the association, said: "We want merely to emphasize how important it is to the state that this industry be preserved on its present level. Cotton brings in $150 million in income for Arizona every year. We think it would be well worth the state's expense of $1 million to save this vast industry which benefits everyone in the state."

Dr. George Wene, entomologist from the University of Arizona agricultural extension division, pointed out that in southern states "where the people have learned to live with pink bollworm rather than fight it," the worm has reduced the average yield from 2½ bales to the acre to about 1 bale an acre. "Arizona, with its high production costs, cannot afford to take this loss, particularly when we could whip the problem before it becomes as extensive as in other states."

Damage done by the worm so far in Arizona, according to Dr. James N. Roney, of extension division, has been confined mainly to Maricopa and Pinal Counties, where 30,000 acres are infected.

Cyanamid Ends Sale of Methyl Parathion Technical

NEW YORK—American Cyanamid Co. has discontinued the sale of methyl parathion technical, an insecticide for controlling cotton boll weevils.

B. F. Bowman, marketing director of Cyanamid's agricultural division, said that greater emphasis will henceforth be placed on the sale of malathion and ethyl parathion technical, which is sold under the trade name of Thiophos.

Spencer Chemical Co. Shows Sales Improvement

KANSAS CITY—The improvement in sales over the previous year, reported by Spencer Chemical Co. in the six months ended Dec. 31, is expected to continue in the last half of the current fiscal year, according to Kenneth A. Spencer, president.

The larger volume in the first six months of the fiscal year reflected higher polyethylene business due to an expanded demand and a greater capacity at the firm's enlarged facilities at Orange, Texas. Although a larger volume of nitrogen products was sold, it did not contribute to the increase in dollar sales, because of the lower prices in effect during that period, Mr. Spencer said.

Net profits for the six months showed a decrease, due in large part to lower prices and higher costs for nitrogen products. The graduating price schedule for nitrogen products resulted in peak sales in September and December, necessitating advance storing, warehousing and shipping, all of which increased expenses, Mr. Spencer said. Administrative expenses, however, were reduced.

Net sales for the six months ended Dec. 31 were $23,878,577, compared with $21,194,629 a year ago. Net profit of $1,374,009 was equal to 98¢ a common share, after preferred dividends, as compared with $1,578,081, or $1.16 a share, a year earlier.

For the second quarter ended Dec. 31, sales amounted to $11,917,552, compared with $10,474,886 in the like quarter a year earlier. Net profit was $654,001, equal to 46¢ a common share, against $742,749, or 54¢ a share, a year earlier.

Commenting on future prospects, Mr. Spencer said that the seasonal price increase on nitrogen products which became effective Jan. 1 should benefit sales for the balance of the fiscal period, when the movement normally reaches its peak. General economic and agricultural conditions in the areas served by the company are considered to be good at this time, he added.

Directors have voted the usual quarterly dividends of 60¢ a share on the common and $1.05 a share on the preferred stocks, both payable March 1 to holders of record Feb. 10.

THAYER PRESIDENT

PEMBROKE, MASS.—Carl G. Peterson has been named president of Thayer Scale Corp. and Thayer Manufacturing Corp., a wholly owned subsidiary.

TOP AGRONOMY STUDENT—Paul E. Kaste (center), University of Minnesota agriculture student, winner of the 1958-59 National Plant Food Institute Agronomy Achievement Award at the university, is shown with Edward R. Schumann, (left), NPFI district representative, and Dr. A. A. Dowell, assistant dean of the College of Agriculture. Mr. Kaste, a senior in agronomy and soils, received a plaque, inscribed with his name, which will be retained at the university, a $200 cash prize and an engraved key. He has maintained a B-plus scholastic average. He is active in student affairs, a member of the Plant Food Industry Club and the Lutheran Student Assn. He has had to work while going to college to earn a major part of his expenses. During the summer months he helps his father on the family farm at Fertile, Minn.

Joseph A. Howell Named Chairman of Fertilizer Tax Group

WASHINGTON — Joseph A. Howell, Richmond, Va., has been named chairman of the Fertilizer Committee for Tax Equality, a special committee of the National Tax Equality Assn., Washington, D.C.

As chairman, Mr. Howell succeeded Howard A. Parker, president of the Parker Fertilizer Co., Sylacauga, Ala.

Vice chairmen of the committee are Fred J. Woods, president, the Gulf Fertilizer Co., Tampa, and R. L. King, president, Georgia Fertilizer Co., Valdosta, Ga.

Mr. Howell was the first president of the National Plant Food Institute, and he is a former president of Virginia-Carolina Chemical Corp., Richmond. His career in the fertilizer industry started in accounting in 1922 and has been continued recently in a consultant capacity.

In addition to serving as chairman of the committee, Mr. Howell will be a consultant to the National Tax Equality Assn.

An association spokesman said the committee "will conduct a dynamic campaign to acquaint the public and the Congress with the necessity for correction of the present laws which unfairly discriminate against the fully-taxed fertilizer and chemical companies."

Other members of the committee are:

L. G. Black, president, Ark-Mo Plant Food Co., Corning, Ark; William Lillard, president, Ft. Smith Cotton Oil Co., Ft. Smith, Ark.; Tom Faulkner, president, Helena Wholesale Inc., Helena, Ark; George Dunklin, general manager, Planters Fertilizer and Soybean Co., Pine Bluff, Ark; B. H. Jones, chairman of the board, Sunland Industries, Inc., Fresno, Cal.; F. F. Bales, president, American Fertilizer and Chemical Co., Denver; L. B. Angel, president, Polk County Fertilizer Co., Haines City, Fla.; Henry Pridgen, manager, Florida East Coast Fertilizer Co., Homestead, Fla.; Wallace B. Hicks, president, Wilson & Toomer Fertilizer Co., Jacksonville, Fla.; R. M. Howard, president, Howard Fertilizer Co., Orlando, Fla.; C. F. Daily, president, West Coast Fertilizer Co., Tampa, Fla.; W. L. Waring, Jr., president, Lyons Fertilizer Co., Tampa, Fla.; James Champion, Jr., vice president, Albany Warehouse Co., Albany, Ga.; M. E. Williams, president, Stevens Industries, Inc., Dawson, Ga.

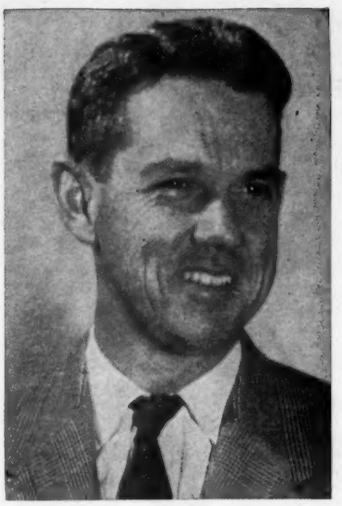
Allen D. Brent, vice president, So. Fertilizer & Chemical Co., Savannah, Ga.; Don Peterson, president, Ashkum Fertilizer Co., Ashkum, Ill.; D. E. Gilchrist, president, Gilchrist Plant Food Co., Morris, Ill.; J. L. Schell, secretary-treasurer, Kingsbury & Co., Inc., Indianapolis, Ind.; Harold S. Vorhes, executive vice president, Vorhes Chemical Corp., Charles City, Iowa; Jack B. Snyder, president, Snyder Chemical Co., Inc., Topeka, Kansas; Gene Van Deren, vice president and general manager, Bluegrass Plant Foods, Inc., Cynthiana, Ky.; Ed. Schueller, secretary-treasurer, North American Fertilizer Co., Louisville, Ky.; J. D. Stewart, Jr., president, Federal Chemical Co., Inc., Louisville, Ky.; G. R. Nooe, general manager and treasurer, Ohio Valley Fertilizer Corp., Maysville, Ky.; T. J. Bartlett, partner, Bartlett & O'Brian Fertilizer Co., Owensboro, Ky.; Nat H. Love, president, Commonwealth Fertilizer Co., Inc., Russellville, Ky.; Curtis Taylor, vice president, Arcadia Cotton Oil Co., Inc., Arcadia, La.

S. M. Hackett, president, Dixie Fertilizer Co., Inc., Shreveport; Robert Harding, president, Valley Fertilizer Co., Greenville, Miss.; Doyle Patterson, president, Farm Belt Fertilizer & Chemical Co., Kansas City; Howard Peterson, president, Lincoln Service & Supply Co., Grand Island, Neb.; William Farley, president, the Smith Agricultural Chemical Co., Columbus, Ohio; George Gage, president and general manager, Anderson Fertilizer Co., Inc., Anderson, S.C.; W. G. Nelson, executive vice president, Southwest Fertilizer & Chemical Co., El Paso, Texas; James D. Dawson, Jr., general manager, Fidelity Chemical Corp., Houston; L. P. Martin, president, Marshall Cotton Oil Co., Marshall, Texas; M. S. Wright, Sr., president, Texas Farm Products Co., Nacogdoches, Texas; Harold Trammell, president, Farmers Fertilizer Co., Texarkana, Texas; H. W. Lust, president, Tyler Fertilizer Co., Tyler, Texas; Ralph B. Douglass, board chairman, Smith-Douglass Co., Inc., Norfolk, Va., and Donald W. Aitken, president, Midwestern Phosphate Corp., Madison, Wis.

Net Profits Reported

NEW YORK—The American Agricultural Chemical Co. here reported a net profit from operations after taxes for the six month period ending Dec. 31, 1958, of $168,879.33, compared to $440,544.74 during the same period the previous year. This amounted to 27¢ a share for the 1958 period, compared to 70¢ a share in 1957.

Gross profit from operations for the period in 1958 amounted to $2,945,187.71, compared to $3,052,391.52 in



J. Drake Watson

J. Drake Watson in New Pennsalt Position

TACOMA — Appointment of J. Drake Watson to the position of general manager, Pennsalt Agricultural Chemicals was recently announced by Fred C. Shanaman, president of Pennsalt of Washington Division, Pennsalt Chemicals Corp.

Mr. Watson, a graduate of Clemson College and Virginia Polytechnic Institute in agronomy, and a veteran of World War II, joined Pennsalt Agricultural Chemicals in 1948 after several years' experience at southern agricultural experiment stations. He served as a technical sales representative and later as district manager with offices at Montgomery, Ala.

After military duty during the Korean conflict, Mr. Watson assumed sales manager duties for a southern district and in 1954 became administrative assistant to the general manager, agricultural chemicals. For the past two years, he has been administrative assistant to the president, as well as handling the export sales.

Mr. Watson will maintain his office at Tacoma, which is the headquarters for the Pennsalt of Washington division and also headquarters for Pennsalt's Agricultural Chemicals.

Soil Sampling Project Underway in Oregon

PORTLAND, ORE. — An Oregon soil testing project is currently underway in Jackson and Josephine counties, reports Leon S. Jackson, secretary of the Pacific Northwest Plant Food Assn.

The project was submitted by the association's soil improvement committee and okayed by the board of directors. It is a cooperative project with the American Potash Institute, National Plant Food Institute, Oregon State College and the association taking part.

Five vocational-ag classes — at Phoenix, Central Point, Eagle Point, Grants Pass and Cave Junction—will participate in the program. About 800 soil samples will be taken by these classes in the two counties. Each student is to take at least two samples, with about 300 students involved.

The samples will then be analyzed by Oregon State College and the returns studied by the students.

Arthur King is representing the college, Todd Tremblay is representing NPFI and Grant Braun the American Potash Institute.

ALABAMA FERTILIZER SALES

MONTGOMERY, ALA.—Fertilizer sales in Alabama during December, 1958 amounted to 19,520 tons or 4,719 tons more than December of the previous year, reported R. C. (Red) Bamberg, commissioner, Alabama State Department of Agriculture and Industries, Division of Cooperatives and Reports.

Farmer Cooperatives Net $275 Million from Fertilizer Business

WASHINGTON—Farmer cooperatives did nearly $275 million in net fertilizer business and another $40 million in farm chemicals during 1956-57, reported the Farmer Cooperative Service, U.S. Department of Agriculture.

Total farm supplies sold by the cooperatives during the period amounted to more than $2.1 billion, or about 5% more than the previous similar period.

According to the report, farmers did 6.4% more business on a dollar basis through their cooperatives in 1956-57 than they did the year before.

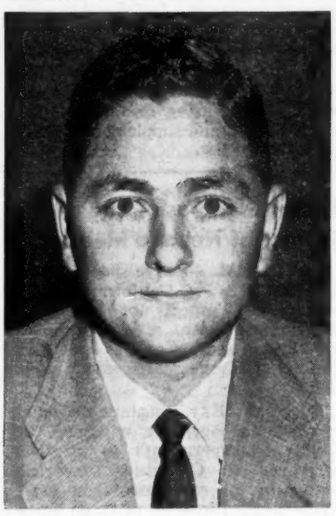
Super Output Holds Steady in November

WASHINGTON—Production of superphoshate and other phosphatic fertilizers during November totaled 208,823 short tons, compared with 207,990 short tons in November, 1957, according to the Bureau of the Census. November shipments were 122,534 short tons, down slightly from 123,414 short tons in November, 1957. Stocks on hand at the end of last November amounted to 356,491 short tons, a decrease from 375,678 short tons a year earlier.

November, 1958 production included 113,104 short tons of normal and enriched, 72,845 short tons of concentrated, 13,577 short tons of ammonium phosphates and 9,297 short tons of other phosphatic fertilizers, including wet-base goods.

Joins Massachusetts Staff

AMHERST, MASS.—Dr. Martin E. Weeks, assistant director, Division of Agricultural Relations, Tennessee Valley Authority, has been appointed professor of agronomy in the College of Agriculture at the University of Massachusetts. As extension agronomist, he will be responsible for Extension Service educational work as a member of the agronomy department, according to Dr. Dale H. Sieling, dean and director. Dr. Weeks was program agronomist and manager of the fertilizer distribution branch of TVA before assuming his most recent position in the agricultural relations division of the agency.



Robert V. Collier

DISTRICT MANAGERS — Two district sales manager promotions have been announced by Collier Carbon & Chemical Corp., Los Angeles. Robert V. (Buck) Collier has been appointed Arizona district sales manager. He will be located in Phoenix and will report to R. G. Hickle, southern area manager. Alexander A. Scotland has been appointed central California district sales manager. He will be located in Visalia and will report to John E. Wise, central area manager.

PRICE SUPPORT

(Continued from page 1)

market prices of the previous three years.

2. In the case of wheat in 1960 this would mean that the stop-gap wheat support program would be probably at 75% of the market price of the previous three years. It is likely this would be about $1.45 bu. In 1961 it would be about $1.30 and in 1962 approximately $1.15.

For corn, USDA officials said their estimate — if Congress adopts the White House recommendations—will be $1.08 bu. in 1960; $1.03 in 1961 and $1.05 in 1962. These figures and those on wheat are approximations.

The cotton economy is also called into the scene. The administration proposal calls for supporting cotton after the 1960 crop at between 75 and 80% of the previous three years' national average price which, according to USDA specialists, would bring a price support range of approximately 22¢ to 27¢ lb.

The theory of the White House message is that the lower levels of price support will reflect the world markets—this goal would be achieved gradually through international agreements. But the basic thought is that the U.S. ultimately will reduce its price for world markets and domestic consumption to meet the well known lower cost of production of these basic crops.

It is an economic axiom that when costs of production decline, the producer should expand sales through lower prices. Under the U.S. price support program this economic policy has been aborted.

With this farm message, the Chief Executive has submitted a choice between a balance sheet or financial trouble. He showed that the small farm has not been covered by the price support umbrella. He also showed that service agencies, the storage warehousemen, have gained profits as innocent bystanders to the price support programs. Secretary Benson has said that storage and interest charges on loan-impounded crops cost the federal government more than $1 billion annually.

Sale of Ex-"Block Buster" Plant is Authorized

MORGANTOWN, W.VA.—Sale or lease of the $63 million Morgantown Ordnance Works here was authorized by the General Services Administration.

Until about a year ago, the plant was operated by the Olin Mathieson Chemical Corp., which decided the plant's ammonia process was noncompetitive in today's markets, a spokesman said.

The GSA is offering the one time "block buster" facility in two parcels —a coke plant and a chemical plant.

NOTICE ANYTHING DIFFERENT ABOUT THESE MULTIWALLS ?

Bemis SINGLE GUSSET Multiwalls are being used by the Davison Chemical Company, Division of W. R. Grace & Company, Baltimore, Maryland. The single gusset bags have good stacking qualities. They palletize well, and the filled pallets are stacked three high. In addition, these new Bemis multiwalls give improved performance on the packer.

Yes, they are different.

For one thing, they are Bemis SINGLE GUSSET Sewn Valve Multiwalls . . . another Bemis *first.* (They stack so uniformly, you have to look closely to notice the single gusset construction.)

But the BIG differences are the ones you will see in the packing performance where you get uniform filling, steadier production and greater economy. Bemis SINGLE GUSSET Multiwalls provide these important time- and labor-saving benefits:

1. The flat tube side, opposite the valve, provides more room for the product flow during filling.

2. The additional space in the corner helps prevent blowout.

3. Fertilizer does not back up and clog the filler spout.

And still another important point—the additional usable space created by the flat tube corner often permits the use of a shorter bag, *which would save you money.*

General Offices—408 Pine Street, St. Louis 2—Sales Offices in Principal Cities

AGENT HONORED—Douglas Knapp, assistant Dade County agent, left, receives a portable transistor radio from Ted Kaplan, King Spray Service, Miami, president of the Horticultural Spraymen's Association of Florida. Looking on, center, is Fred Canal, executive vice president of the Miami-Dade County Chamber of Commerce, speaker at the annual meeting of the association. Mr. Knapp was cited for his work in helping the group organize and get off to a successful start.

ASSOCIATION NOTES BIRTHDAY

Florida Spraymen Look Back on Successful Public Relations Work During First Year

MIAMI—The Horticultural Spraymen's Association of Florida, which was formed last year with 18 charter members, has increased its membership to a total of 36. There was a nearly 100% attendance of members and their wives at the installation dinner in honor of officers who will serve during the coming year.

Tep Kaplan, King Spray Service, was unanimously reelected president, and William McAllister, Miami Lawns Inc., who served last year as secretary, was advanced to the position of vice president. Other new officers are Gus Daye, Superior Nursery & Spray Service, secretary, and Harold Hale, Southwest Seed & Garden Center, treasurer.

Although the association, just beginning its second year, is Miami's youngest trade group, it is growing rapidly and during the past year many of its original objectives were accomplished. Membership is comprised of a wide variety of business firms engaged in spray work. The name is derived from the fact that they all have problems connected with the spraying of lawns and home landscaping. Actually, the group includes landscapers, nurserymen, garden supply dealers, exterminators, pest control firms, seed stores, tree surgeons and even roof coating companies.

At the time of its organization, the industry was the subject of a considerable amount of criticism because of some unreliable operators who were fleecing homeowners with inferior materials and methods. In order to overcome this condition and to gain public confidence, the association adopted a trade emblem which was publicized through group advertising in newspapers, classified pages of the telephone directory, on television programs and in trade publications.

The advertising invited victims of unsatisfactory work to phone or write the association and when the board of directors investigated such complaints, it was usually found that the work had not been done by one of their members. If, however, a member was guilty of unethical practices, prompt action was taken to make necessary amends or the member was expelled.

At the installation dinner, Fred Canal, executive vice president of the Miami-Dade County Chamber of Commerce, heartily commended the spraymen for joining together to work out their problems, and he encouraged them to take an active part in local government. The spraymen are doing just that by conferring with a number of other trade associations, such as nurserymen and landscapers, for the purpose of working out a satisfactory county ordinance to regulate the use of poisonous sprays in residential areas.

In reviewing the association activities during the past year, Mr. Kaplan said, "I think our greatest accomplishment of the year is that we have learned to know and like each other. We have also learned to recognize that we must have the problems of the homeowner as well as our own problems in mind. Our public relations program to date has been excellent, but there is still room for improvement in this field."

In appreciation for the assistance rendered during their first year, the spraymen conferred honorary membership upon six people. One was Douglas Knapp, assistant Dade County agent, who was instrumental in arranging for organizational meetings and drafting of the association charter. Mr. Knapp was presented with a portable transistor radio in addition to honorary membership.

Two prominent entomologists, Dr. F. G. Butcher from the University of Miami, and Robert Curran were also made honorary members.

In recognition of the favorable publicity received by the association, honorary memberships were bestowed upon Nixon Smiley, garden editor of the Miami Herald; Ruth Stuart Allen, publisher of the Southeastern Nurseryman, and Porter V. Taylor, freelance writer and photographer, and special Croplife correspondent.

New Assistant Manager

NEW YORK—George H. Walker, a member of the Cleveland sales organization of the American Agricultural Chemical Co., New York, has been named assistant manager at the Cleveland plant, which manufactures Agrico fertilizers, according to an announcement by W. J. Turbeville, Jr., vice president in charge of fertilizer sales.

IDAHO MEETINGS

PORTLAND, ORE.—Six Fertilizer Dealers' Days have been set up for Idaho, announced the Pacific Northwest Plant Food Assn. They include: Feb. 16, Caldwell; Feb. 17, Twin Falls; Feb. 18, Pocatello; Feb. 19, Rexburg; Feb. 25 Coeur D'Alene, and Feb. 26, Lewiston.

USDA Rates Simazin Excellent for Grass, Weed Control in Corn

WASHINGTON—A pre-emergence spray of simazin offers excellent control of annual grasses and broadleaved weeds in sweet corn, without adversely affecting yield, quality, palatability or maturity date of the corn, a U.S. Department of Agriculture scientist reports.

Best results were obtained by the application of 4 lb. of simazin an acre, according to Dr. L. L. Danielson of USDA's Agricultural Research Service, who conducted the research at Beltsville, Md., during the past two growing seasons. The findings also indicate that the chemical applied at lower rates may be effective and practical if cultivation is limited.

For test purposes, sprays were applied on field plantings of eight sweet corn varieties. Tests in 1957 were made to determine the effects of simazin on growth and development of sweet corn. Last year, efforts were made to learn whether these effects, if any, might have some connection with yield, quality and palatability.

Simazin was evaluated at 2, 4, and 8 lb. an acre. Rainfall was excessive during the 1958 season and increased the effectiveness of the herbicide in killing young weeds before emergence.

George Van Nostrand Elected President of North Dakota Nitrogen

BISMARCK, N.D.—George C. Van Nostrand was elected president of the North Dakota Nitrogen Co. at the January meeting of the board of directors, according to Tom Kleppe, a member of the board.

Mr. Van Nostrand was born in Fairfield, Iowa, and, after attending Grinnell College and the University of Iowa, practiced law in Fairfield until 1942, when he joined the U.S. Armed Forces. In 1946, on release from the service, he became associated with American Airlines and, since 1954, has been vice president of properties and facilities, with offices in New York City.

Membership Invited in Fertilizer Dealer Group

PASCO, WASH.—An invitation to all Washington state liquid fertilizer dealers to become active members of the newly formed Washington Liquid Fertilizer Dealers Assn. was given by J. O. English, Moses Lake, president.

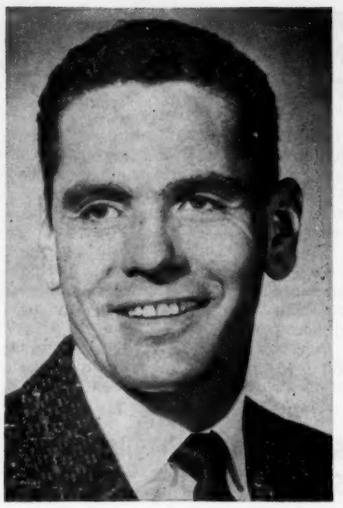
Fertilizer manufacturers, equipment suppliers and others interested in the welfare of the liquid fertilizer business in the state are urged by Mr. English to become associate members.

Officers for 1959 besides Mr. English, are C. L. Cummings, Walla Walla, vice president; Sherman McGregor, Hooper, secretary, and Lyle Neff, Pasco, treasurer. Directors include John Thomas, Sunnyside; Edward Andrus, Lacrosse; Warren Wilkinson, Ritzville, and Ray Whitcomb, Grandview.

About 50 Washington dealers from all parts of the state attended the recent organizational meeting here. The next association meeting will be here Feb. 11, 1 p.m. at the PUD auditorium.

JOHN E. DUDLEY DIES

ST. PETERSBURG, FLA.—John E. Dudley, 72, an entomologist for the U.S. Department of Agriculture from 1911 until his retirement in 1951, died here recently. Mr. Dudley was instrumental in developing insecticides to control the pea aphid in Wisconsin and the gypsy moth infestations in New England.



Wilbur C. Hanes

Wilbur C. Hanes Named To Geigy Sales Post

YONKERS, N.Y.—Wilbur C. Hanes has been named Southern California and Arizona sales representative for Geigy Agricultural Chemicals, division of Geigy Chemical Corp., it was announced at the firm's headquarters here.

Mr. Hanes formerly headed the pest control program for Monrovia Nursery Co., and in 1950, joined Trojan Laboratories as manager of pest control service, and as agricultural chemical consultant.

Favorable Rains Help California Winter Crop

SACRAMENTO, CAL.—Favorable light to moderate rains have benefited the California Central Valley winter grain crop which was planted in dry soil because of the fall drouth.

Barley, wheat and oats have made rapid growth and seed that had not sprouted has emerged. With the improvement in the soil moisture situation, fields were quickly up to good stands.

California fruit and nut growers are still worried in many districts about lack of dormancy in their trees, the result of too much warm weather earlier in the season. Evidence of premature bud development and growth has been reported from many areas.

Warm weather following the rains was beneficial to range livestock operators but grazing on new forage still is limited and supplemental feeding is required.

Better Sagebrush Range Subject of Nevada Meeting

DAVIS, CAL.—Range specialists of the University of California, Davis, will discuss aspects of sagebrush range improvement at a meeting of the Nevada section of the American Society of Range Management, Feb. 19-20.

Burgess L. Kay, assistant specialist in range management, will give the results of experiments on nitrogen carryover on California sagebrush range. In the experiments, he says, single applications of nitrogen fertilizer were made in 1955. Increased forage responses from the initial fertilizer application were shown in 1956, 1957, and 1958.

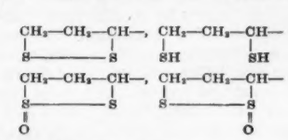
Walter E. Howard, specialist in field station administration, will discuss rodent problems in sagebrush range. Mr. Howard points out that in sagebrush country poor weather and soil conditions open the way for rodents whose natural habitat is bare range. He will also discuss means of rodent control.

The meeting will be held in Battle Mountain, Nevada.

Industry Patents and Trademarks

2,871,154

Fungicidal Compositions and Methods Employing Lipoic Acids. Patent issued Jan. 27, 1959, to Norman E. Searle, Wilmington, and Dale E. Wolf, Hockessin, Del., assignors to E. I. du Pont de Nemours & Co., Wilmington. A method for controlling the spoilage of fruits and vegetables caused by fungi which comprises applying to the fruits and vegetables, in a fungicidally effective amount, a compound of molecular weight not more than 500 and of the formula R—R′—COR″ wherein R is a monovalent radical of the class consisting of



and C-lower alkyl derivatives of said radicals wherein the alkyl groups are of up to four carbon atoms, R′ is a divalent hydrocarbon radical of not more than 8 carbon atoms and COR″ is selected from the class consisting of carboxyl and groups hydrolyzable thereto.

2,871,155

Fungicidal Composition Comprising Cycloheximide and Solubilized Lignin. Patent issued Jan. 27, 1959, to William Klomparens, Kalamazoo, and Clement D. Vellaire, Richland Township, Kalamazoo County, Mich., assignors to the Upjohn Co., Kalamazoo. The method of protecting foliage plants from injury on the application of cycloheximide thereto which comprises concomitantly applying to said foliage a solubilized lignin in the proportions of from about 1,000 to about 4,000 parts of solubilized lignin for each part of cycloheximide.

Industry Trade Marks

The following trade marks were published in the Official Gazette of the U.S. Patent Office in compliance with section 12 (a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the Gazette. (See Rules 20.1 to 20.5.) As provided by Section 31 of the act, a fee of $25 must accompany each notice of opposition.

Tryben, in capital letters, for weed killing compounds. Filed April 14, 1958, by E. I. du Pont de Nemours & Co., Wilmington, Del. First use March 24, 1958.

Northrup King, in capital letters, for lawn weed killer and a crabgrass killer. Filed April 14, 1958, by Northrup, King & Co., Minneapolis, Minn. First use Feb. 1, 1951.

Eveready, in capital letters, for chemical compositions for use in the garden and on the lawn to control crabgrass, weeds and plant diseases, and for use in the home and garden and on the lawn to control insects. Filed May 26, 1958, by Union Carbide Corp., New York. First use Feb. 7, 1958.

Antchek, in capital letters, for insecticide. Filed June 20, 1958, by Rotenone Products Co., East Orange, N.J. First use April, 1936.

Design, drawing of elaborate leaf on which the words Azalea, Rhododendron and Camellia appear with the first letters of each being an outlined block capital letter and the word Triple XXX, for plant food. Filed April 8, 1958, by the Stadler Fertilizer Co., Cleveland, Ohio. First use July 11, 1957.

Design, drawing of three Dutch girls in a diagonal line holding signs reading Flowers, Shrubs and Vegetables over an outlined rectangular and circular shape bearing the words Gard N Grow, with the N being in large block form, for plant food. Filed April 8, 1958, by the Stadler Fertilizer Co., Cleveland, Ohio. First use Nov. 7, 1952.

Design, a double circle which has two horizontal lines and a large arrow passing through the center with the arrow piercing the center of three large X's and the words Triple-X Lawn Food being printed around the circumference of the inner circle, for lawn and tree food. Filed April 8, 1958, by the Stadler Fertilizer Co., Cleveland, Ohio. First use Jan. 20, 1958.

Grasslands Demonstration Farm Gains Cited

Accomplishments of the Oregon grasslands demonstration farm, for the past three years sponsored by the Pacific Northwest Plant Food Assn., have been noteworthy. They include: Getting a group of 10 or 11 agricultural technicians to work together on one specific program with cooperation from all; a 330% increase in grain yields per acre; a 200% increase in silage production with less land in production because of reseeding some of the acres to new pasture land; and an increase of 1,576 cow days pasture. This increase in production totals out to 52,269 more TDN's produced on the farm in 1958 over 1955. Converted, it means that it would take care of 10 TDN per cow day.

Diamond Alkali Sales Down 7% from 1957

CLEVELAND, OHIO — According to Raymond F. Evans, chairman and president, preliminary and unaudited figures for Diamond Alkali Co. for the year 1958, indicate sales of approximately $114,200,000 and earnings after taxes of $6,475,000, or $2.32 per common share on the 2,796,421 shares outstanding at the year end.

Mr. Evans said that these results amount to a decrease of 7% in sales and 8% in earnings for 1958 as compared to 1957.

Mr. Evans pointed out that while earnings of 88¢ per share were indicated for the fourth quarter of 1958 as compared with earnings of 31¢ per share for the fourth quarter of 1957 on about the same sales volume, approximately 17¢ per share resulted from adjustments applicable to the prior three quarters' operations. Reported earnings for the first three quarters of 1958 were 31¢, 55¢ and 58¢.

Airplane's Importance Theme Of California Convention

SACRAMENTO, CAL. — Airplanes are becoming increasingly important in farming throughout the world and new activity in research may lead the crop dusting industry into a new and even more vital role in agriculture.

This, in general, was the theme of the convention of the California Agricultural Aircraft Assn. at Hotel Senator here. Norman B. Akesson, associate agricultural engineer of the University of California, Davis, was one of the principal exponents of this optimistic outlook.

"Certainly aircraft has become an established way of handling the increasingly complex problems of pesticides, seeding and fertilizer applications even in such areas as orchards, vineyards, and other tall crops," Prof. Akesson said. "For large scale field applications, the aircraft is fast becoming the accepted means of application the world over."

Prof. Akesson, who recently completed a 14 month tour of agricultural aircraft facilities throughout the world, said the greatest apparent potential for crop dusters outside the U.S. was in Africa, Asia and South America, where generations of farming have not cut farmlands into small pieces, uneconomical for crop dusting.

In the U.S., he said, about 1,200 airplanes treated about 60,000,000 acres last year, including repeat applications. Of this, the greatest portion was treated for insect control, with smaller percentages treated for plant diseases, weed and brush control, defoliation, seeding and fertilization.

In California, a much larger portion of total acreage was covered by crop dusters. About one-fourth of the nation's agricultural aircraft are in this state.

"At the University of California," Prof. Akesson said, "our primary interests in aircraft research have been into the atomization, distribution deposit and drift of spray materials. The university has its own airplane to conduct the tests."

One of the features of the convention was the appearance of Col. Gregory (Pappy) Boyington, World War II ace and commander of the famed Marine Corps Black Sheep Squadron. Col. Boyington found several old pilot friends among the convention delegates.

The principal speaker at the annual dinner, Col. Boyington, was introduced by James French of Bakersfield, retiring president of the association. His talk dealt with his adventures in getting to be a Flying Tiger and his experiences with such international figures as Chiang Kai-Shek, Madame Chiang and Gen. Claire Chennault.

Among the other speakers were Allen B. Lemmon, California Department of Agriculture, and John Neace, Phoenix, Ariz., a leader in development of agricultural aviation methods.

At the conclusion of the speaking program, demonstrations of new crop dusting equipment were held at Sacramento Sky Ranch.

Mrs. Wanda Branstetter, Fresno, association secretary-treasurer, was in charge of convention arrangements.

Mr. French was succeeded as president by James Vedder of Imperial who stepped up from vice president. Monte Landsiedel of Dos Palos, was elected vice president and Wayland Fink of Patterson, was elected secretary-treasurer succeeding Mrs. Branstetter.

Newly elected directors include Milton Watts, Woodland; George H. Baldrick, Hanford; John Coulston, Oxnard; John W. Davis, Colusa County; Nick Mollar, Maxwell, and Vince Bittleson, Buttonwillow.

Defoliating Insects on Rise in New Mexico

ALBUQUERQUE — Although total damage to New Mexico forests declined substantially in 1958, infestations of defoliating insects are on the increase. These trends are being studied by U.S. Forest Service officials here.

Improved moisture conditions over the past two years have resulted in healthier trees, and this has caused a substantial decline in infestations of bark-eating beetles. But defoliators, in contrast, destroyed about 15% more timber acreage in 1958 than in 1957.

The Forest Insect and Disease Laboratory's year-end report, prepared by Frank Yasinski and D. A. Pearce, shows that beetle infestation dropped from 2,106,470 acres in 1957 to 879,760 last year. Damage by defoliators rose from 383,890 acres to 439,520 acres.

The douglas fir beetle caused widespread damage in the Cibola, Gila and Santa Fe National Forests, but most of the timber killed was of low commercial value. The Black Hills beetle hit 19,000 acres in the Carson Forest, but was controlled by a chemical insecticide.

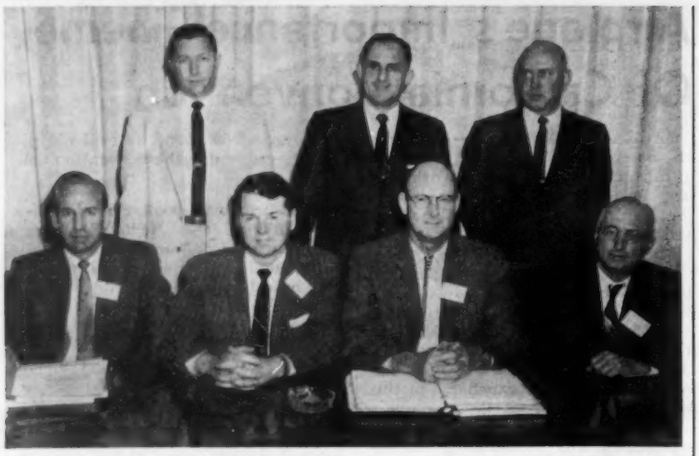
One of the most serious defoliators —the spruce budworm—made heavy inroads into the Carson and Santa Fe forests, and the report recommends chemical control by 1960 and 1961.

The fall webworm damaged park areas north of Santa Fe and the walnut caterpillar destroyed trees in Carlsbad Caverns National Park.

Society Names Officers

ST. PETERSBURG, FLA.—Dr. P. H. Senn, head of the agronomy department of the University of Florida, was named president of the Soil and Crop Science Society of Florida during the 18th annual meeting recently held here. Other officers are: Dr. J. R. Henderson, extension agronomist, University of Florida, vice president, and R. V. Allison, Everglades Experiment Station, Belle Glade, Fla., secretary-treasurer.

POSTER CAMPAIGN—Commercial Solvents Corp., New York, introduced a new poster promoting Hi-D, an ammonium nitrate fertilizer, at its agricultural chemicals department sales convention, held at the Hotel Monteleone, New Orleans, recently. Shown against the poster backdrop, which occupied almost an entire wall of the hotel meeting room, are John N. Cronk, advertising manager of Commercial Solvents Corp., and Clyde T. Marshall, general manager of the agricultural chemicals department. The Hi-D outdoor program will run during the winter months, beginning in February, in southern and mid-western areas, according to Outdoor Advertising, Inc. Fuller & Smith & Ross, Inc., New York, is the agency.



ARIZONA PANEL—A highlight of the recent Arizona Fertilizer Conference held at the University of Arizona, Tucson, was a panel discussion on "Fertilizer Use Economics in Arizona." Among those taking part were, from left to right, seated, Dr. J. L. Mellor, Olin Mathieson Chemical Corp.; L. E. Gould, Shell Chemical Corp.; E. O. Foster, chairman of the Soil Improvement Committee of the Arizona Agricultural Chemicals Assn. and panel chairman, and Lyle L. Young, Arizona Bankers Assn. Standing are: Dr. Lemac Hopkins, California Spray-Chemical Corp.; Dr. Russell Coleman, executive vice president of the National Plant Food Institute, and Dr. Raymond Seltzer, head of the department of agricultural economics at the University of Arizona.

ECONOMICS OF FERTILIZER USE

Farmers Must Boost Production Efficiency To Keep Net Returns at Reasonable Level

By DR. R. E. SELTZER*

During the past few years, the problem of agricultural surpluses has become increasingly burdensome, and it is no longer popular to talk about research or promotion of developments which are output increasing. Fortunately, with regard to many of these technological advances, including fertilizer, we can play a more popular tune—that of increasing efficiency of production, per acre, per man-hour, etc.

During the period since the end of World War II, producers have been faced with constantly rising costs per acre of production. It has only been by increasing yields and otherwise increasing efficiency in production that they have been able to keep their per unit costs to a reasonable level.

If we compare costs per acre and prices per acre for our major field crops in Arizona, we find that, using 1945 as 100, the price index during 1958 was 142 and the per acre cost index was 257. In other words, per acre costs went up over three times as much as prices. If there had been no increase in crop yields, the situation would have been extremely critical.

However, when we convert these per acre costs to a cost per unit of production, we find a 1958 index of 146 for costs, compared to the 142 price index. Thus, in view of rising per acre costs, farmers must increase efficiency of production in order to maintain net returns at a reasonable level.

Arizona producers use large amounts of commercial fertilizers, per acre, and in total. During 1959, it is estimated that the average amounts, in terms of chemical plant nutrients, which the typical producer will use, will be as follows: cotton—110 lb. nitrogen, 50 lb. P_2O_5; alfalfa for hay—75 lb. P_2O_5; barley—75 lb. nitrogen, 35 lb. P_2O_5; and grain sorghum—100 lb. nitrogen, 35 lb. P_2O_5.

The cost per acre for these amounts including cost of application would be: cotton—$17.50, alfalfa—$8.30, barley—$11.15, and grain sorghum—$13.35.

The application of fertilizer to land provides a classic example of the operation of a basic economic principle—the principle of diminishing economic returns. This principle says, in effect, that as successive units of a variable factor of production (in this case, fertilizer) are applied to a fixed amount of land, amounts of the other factors applied remaining the same, returns realized from the application of each additional unit of the variable factor at first increase, then decline toward zero, and after a certain point may even be negative. The curve which shows the total returns from production is basically S-shaped.

The exact nature of the marginal returns from the application of fertilizer to a given crop will be determined by three principal factors: (1) the increase in yields obtained, (2) the price of the crop produced and (3) the cost of the fertilizer applied. The marginal return per increment of fertilizer applied then equals (the increase in yield x the price per unit of yield)—the cost of the increment of fertilizer applied. Theoretically, the producer could afford to apply additional increments of fertilizer to the point where the value of the increase in yield resulting from the application of the last increment of fertilizer is just equal to the cost of that increment of fertilizer.

High per-acre costs incurred in the production of Arizona's field crops make it necessary to produce crops having a high value per acre. The individual farmer can do little to influence the general level of prices which he receives for his crops, but he can influence the value per acre through increasing yields. One of the yield-increasing practices over which the producer has direct control is the amount and type of fertilizer that he uses.

*EDITOR'S NOTE—The accompanying article is a portion of a talk given by Dr. Seltzer at the recent Arizona Fertilizer Conference. Dr. Seltzer is head of the department of agricultural economics at the University of Arizona.

Appointed Manager

GRAND RAPIDS, MICH.—John Metzen has been appointed manager of agricultural sales for the Haviland Agricultural Chemicals Co. here. A graduate of Western Michigan University in Kalamazoo, Mich., Mr. Metzen has been associated with Standard Oil Co. agricultural sales for the past nine years.

ARIZONA MEETING

(Continued from page 1)

lb. nitrogen and was not shown at higher rates of nitrogen. Responses to low levels of nitrogen were general on cotton. This experience was duplicated on wheat with no significance to varying rates of phosphorus and yields were depressed with the highest rate of nitrogen—200 lb. Nitrogen responses were general on sorghums using 120 to 300 lb. an acre with phosphorus responses at two locations.

Dr. C. O. Stanberry, University of Arizona, reported alfalfa responses to phosphate applications below 12 in. Plant nutrient uptake did not occur in the surface foot due to the absence of feeder roots caused by high temperatures and inadequate moisture supplies, but it varied with the phosphorus concentration where observed.

Dr. J. W. Pou, new director of the Arizona Agricultural Extension Service, pointed out that the city man's stake in agriculture is no longer just food and fiber but now includes his job. Agriculture is now annually a billion dollar customer for industry, labor and finance. Production expenses alone are now $24 billion and will have to increase approximately $12 billion more if we are to adequately feed our population in 1975. We must include programs on either side of the farmer in developing new horizons—marketing and processing industries and industries producing farm supplies.

Ted Siek, farm manager, J. G. Boswell Co., uses cropping history, yields and field notes in combination, soil study, and field testing to make decisions of the grower in fertility management. Economic implications are that more intelligent use of increasing amounts of commercial fertilizer will be necessary in today's agricultural situation. Continued support of the land grant college and university research program is assisting the program of the grower.

Soil management requires knowledge of the fertility program, the soil, irrigation water, the cropping program, and the man. The agricultural extension program in this instance deals with the individual farmer and his fields involving all available background information for the particular situation, said James Carter, Maricopa County agent. The talk was illustrated by a specific example of a farm well known to the speaker showing first impressions, results of study of the farm and a soils map of it, irrigation considerations, and importance of knowing the farmer.

Lyman Amburgey, extension soils specialist, pointed out that the University of Arizona's mobile research program was being used as a demonstration program in effect. By the time experimental results become conclusive and suitable for demonstration they are already a part of the grower's program. In considering soils problems it was felt that more could be learned from a hole than from a chemical analysis of soil removed from it. The study of limiting factors is of extreme importance. This might reduce fertilizer use or restrict increased usage temporarily but will lead to sound, profitable, and increased use later.

Dr. D. O. Robinson, Arizona State University, used a college farm demonstration as an example of its importance in the teaching program. Pot tests in the laboratory showed measurable recovery of 90% of the nitrogen applied in solution using anhydrous ammonia and ammonium nitrate as sources. Under field conditions anhydrous ammonia applied in irrigation water was measured as 30% recoverable in the shade and only 15% in the sun. Ammonium nitrate was 40% and 20% recoverable. These are averages with the highest rate recoverable nearest the irrigation ditch and less recoverable the further the distance from the ditch.

Increased yields provide the same net profit from fewer acres and less total investment, said Dr. Russell Coleman, NPFI vice president. Increased efficiency leads to less surplus production, fewer acres involved, and no sacrifice in dollar returns. Emphasis was placed on the method of presentation showing costs, yields, and profit for each commodity.

"Fertilizer use brought about the origin of scientific agriculture," according to Dr. Raymond Seltzer, head, department of agricultural economics, University of Arizona, "and is one of agriculture's most important technological advances. Burdensome surpluses have made production research an unpopular subject. Increasing efficiency of production, per acre, per man hour, and so forth are important in maintaining net returns at reasonable levels, however. Arizona's high per acre production costs require growers to produce the highest per acre value crops. The amount and type of fertilizer is one of the yield increasing practices over which the grower has direct control."

Fertilizer costs are lower and have risen more slowly than other costs, said L. E. Gould, Shell Chemical Corp., in opening a panel discussion. Fertilizer use has been highly profitable and is a bargain.

Dr. Lemac Hopkins, California Spray-Chemical Corp., discussed the salesman's responsibilities in selling fertilizers. Some cases of stopping short to save nickels instead of selling added fertilizer to make dollars indicate the need for improved analysis of the situation.

Farming is no longer a way of life, according to Dr. J. L. Mellor, Olin Mathieson Chemical Corp., but is now big business. He estimated 25% of the production in the U.S. to be due to the use of fertilizer. It is significant that increasing amounts of fertilizer lead to increased production per unit of water in an irrigated agriculture.

Lyle Young, chairman, agricultural division, Arizona Bankers Assn., discussed the banker's viewpoint on fertilizer use economics. One-fifth of the agricultural loans are crop loans and two thirds of the anticipated losses are on crop loans. Such loans will continue to be made but with more care being exercised and extra attention being given to budgets. Duplication of credit by commercial concerns and banks is one of the main problems.

"If we were farming and using fertilizers as we did in 1940," Dr. Coleman said, "Mrs. American Housewife would be paying a $13 billion greater food bill annually. The total U.S. Department of Agriculture budget is but one half of the savings afforded the consumer through advanced technology in agriculture. Complete awareness should be developed through consumer education by industry and agriculture."

Cotton is the most important crop in Arizona now, said Dr. Seltzer, and nothing is too good for it. A lower value for cotton may make fertilizers harder to sell.

SPRING DWARF FOUND

SACRAMENTO, CAL.—The State Bureau of Nursery Service, California Department of Agriculture, reports that spring dwarf nematode was found in strawberry nursery stock in Shasta and Tehama counties. Control measures have been instituted on 22 acres in the two counties. No difficulty is anticipated in eradicating the nematode, according to state officials.

Special Merchandising Section

Better Selling

Marketing News and Features

THE FRONT of Loveland's, Inc., in Albuquerque, N.M., shows the parking area, display of seasonal items on the sidewalk, and use of glass panels to give extra light from the top of the show window area.

Supermarket Selling Brings More Dollars To New Mexico Firm

"Our location has a wonderful potential," says Marvin Loveland, owner and manager of Loveland's, Inc., in Albuquerque, N.M.

Loveland's is located in a rising shopping center that will some day have a 1,000-car parking area.

"My store is going to be moved over for the erection of a drug store and we have a supermarket, so why not take advantage of the shopping center trend going on," he says.

Varied lines, Mr. Loveland feels, are also compatible with this "shopping center" location, and he has set up a modern farm supply store with plenty of space.

The firm stocks fertilizers, insecticides, all kinds of feeds, seeds, garden tools with hardware with emphasis on the do-it-yourself tools for home use. Other items handled include garden and lawn supplies, poultry equipment, pet foods and supplies, lawn mowers and pipe fittings for plumbing.

"I find that firms using self-service have been successful, so we've incorporated this method in our store," the veteran (12 years) dealer says.

To accomplish this, he turns a great deal of attention to open displays and peg board racks.

"Too many dealers think the old fashioned store, with no overhead, makes for success. We don't follow that line of thought at all," he claims.

In keeping with this modern trend, the 40 ft. by 100 ft. ex-Navy quonset hut, has an attractive front with opaque glass panels, fibre glass panels and 100% view windows. This provides a big source of light for the interior.

Inside, the store is kept neat, airy and inviting. Mr. Loveland built all the fixtures and island display racks himself. Old lockers, purchased as surplus from a locker manufacturing firm, provide easy-access bulk seed bins.

The firm uses front-of-store displays on seasonal items.

As for advertising, Loveland's utilizes the yellow pages of the telephone book. They also use direct mail advertising "to the people interested in our type of business." In the spring, radio spots feature certain pertinent items. The firm also distributes calendars.

Mr. Loveland has some definite ideas about credit.

"Credit can ruin you in business," he says, "and I say, don't extend too much credit. I realize that the trend in other businesses is toward easier

(Turn to **SUPERMARKET**, page 14)

Flower Garden, Large Display Area Help Merchandise Garden Chemicals

A colorful flower garden and extensive lawn area in front make the Home Garden Nursery in Palo Alto, Cal., distinctive from similar businesses.

The 18-year-old nursery covers one and one-third acres and employs five people plus the four co-owners. George and Peter Doig, Jim Leitch and Sandy Lockhart, gardeners in Scotland before coming to the U.S. many years ago, are partners in the business.

About $100,000 in sales are rung up annually by Home with nursery and store products splitting the receipts. Although the store itself is small and divided into two sections, a wide variety of products for the lawn and garden are stocked there. "Anything you could name, we have," stated Mr. Lockhart about the chemicals, seeds, fertilizers and tools available in the store.

Upon entering, at the left of the doorway is a small room where many products are stored. Small bags of fertilizers and several racks of seeds are also found there.

A storage shed for large bags of fertilizers and gardening equipment is located in the back and adjacent to both rooms is a combination store and shop.

A rack for displaying long-handled garden and lawn tools is situated just inside the door. Nearby are rolls of garden hose, spray cans, nozzles, small tools and additional supplies of chemicals and fertilizers.

The attractive nursery area consists of eight greenhouses and a semi-enclosed area where bedding plants are kept in 7,000 flats.

The colorful nursery has been dressed up with many hanging baskets and pots of seasonal flowers. The containers, hung from rafters supporting the latticework covering over the bedding plants, hold a variety of flowers.

Weekly advertising is conducted in the Palo Alto Times by Home promoting particular products. Each year, in July, the nursery has a special sale on bedding plants, but this is the only sale of the year.

Parking facilities for a number of cars are available in the front of the nursery just off the circular driveway which is bordered by a variety of flowering trees. The flowered border together with the expanse of lawn and the colorful, circular flower garden lend a very appropriate atmosphere to the nursery.

WALL SHELVES in the main part of the Home Garden Nursery in Palo Alto, Cal., hold a variety of items ranging from large bags of fertilizer to garden hose. (See more Home Garden photos on page 12.)

Flying School Opens

FRESNO, CAL.—A flying school offering training in crop dusting as well as in regular flight instruction has opened at the Douglas-Tahoe airport in Minden, Nevada. Murray A. Kahn, director of aviation for the Turbo-Dynamic Corp., which operates the school, said that it will offer instruction for all phases of flying, and that students will be recruited from all over the world. Marty Kronberg, a long-time agricultural aircraft operator, and his three aircraft are associated with the Turbo-Dynamics subsidiary school, known as the Agricultural Aviation Institute.

SHOP TALK

OVER THE COUNTER

By Emmet J. Hoffman
Croplife Marketing Editor

Farm store salesmen are often asked whether sprayers can be thoroughly cleaned of 2,4-D materials.

Researchers at Rutgers University have been using a "bicycle" sprayer without once getting into trouble by following this routine:

(1) Spray out unused material. Refill with water and leave overnight so material won't dry on sides.

(2) Spray out water and refill with clean water. Add detergent or household ammonia.

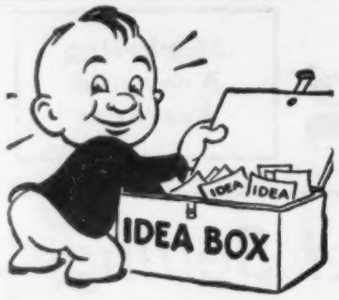
(3) Scrub sides, and be sure to clean the top of the barrel especially. Circulate through pump. Pay special attention to nozzles and strainers.

(4) Pump out and rinse.

(5) Repeat the whole operation.

Sprayers cleaned like this can be used for field crops, but their

(Turn to **SHOP TALK**, page 14)



What's New...

In Products, Services, Literature

You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

No. 6863—Literature On Spreaders

Literature on New Leader power take-off combination lime and fertilizer spreaders has been released by the Highway Equipment Co. Both of the company models, the L-19S and the L-17S, are covered in the colored and illustrated brochure. Specification tables and general information about the spreaders are included. Copies can be obtained by checking No. 6863 on the coupon and mailing to this publication.

No. 6866—Application Equipment Catalog

A 1959 catalog of application equipment for liquid solutions has been prepared by Schelm Brothers, Inc. The catalog contains information, specifications and photos of the company's complete line of equipment. A special section outlines information on accessory equipment. Included among the equipment discussed are air pressure applicators, pump type applicators, applicator tanks and transport tanks. For copies, check No. 6866 on the coupon and mail.

No. 6867—Suction Strainer

Spraying Systems Co. has introduced the "8060 Suction Strainer" for use on spray rigs. The large capacity strainer provides a 75% greater open screen area, company literature claimed. The item is designed for

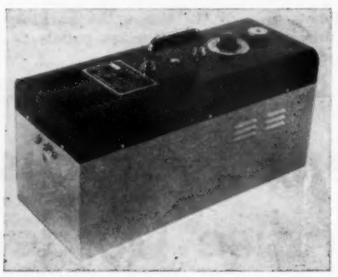
spray rig applications where a large volume of liquid per minute is to be sprayed or where the spray rig user wishes to reduce possibility of clogging, the company said. The unit will pass through any standard size steel drum bung hole, the company said, and liquid can be withdrawn to within 1½ in. of tank or drum bottom. For details, check No. 6867 on the coupon and mail.

No. 6864—Weed Control Bulletin

Stauffer Chemical Co. has published an illustrated brochure which describes the various applications of its pre-emergence herbicide, Eptam. Included are detailed outlines of the crops on which the product can be used and the types of weeds controlled. Descriptions of application methods—broadcast, band, pre-emergence and post-emergence—are also covered. Copies of the bulletin can be obtained by checking No. 6864 on the coupon and mailing to this publication.

No. 6865—Fogging Machine

Aero-Master, Inc., announces a newly designed Model A thermal aerosol insecticide fogging machine. The machine provides insecticide fog dispersal, the company says, and a constant temperature control prevents heat breakdown of insecticide



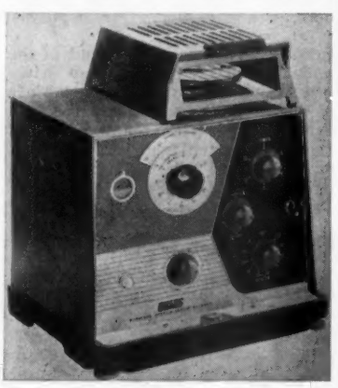
in the thermal pressure chamber. For specifications and further data, check No. 6865 on the coupon and mail to this publication.

Also Available

The following items have appeared in the What's New section of recent issues of Croplife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

No. 7305—Moisture Balance

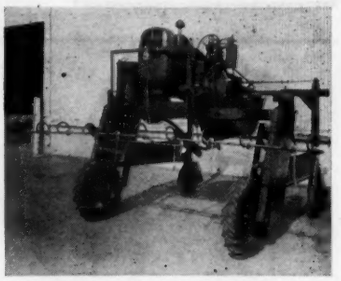
The Ohaus Moisture Determination Balance is a combination drying unit and precision balance which provides an easy way to measure moisture content of a wide variety of



products and materials, announced Seedburo Equipment Co. The unit can be used for solids or liquids and shows the percentage of moisture directly to plus or minus 0.170. The percentage of moisture loss can be read directly throughout the entire cycle as the moisture is driven off, the company says. For details, check No. 7305 and mail to this publication.

No. 6859—Sprayer

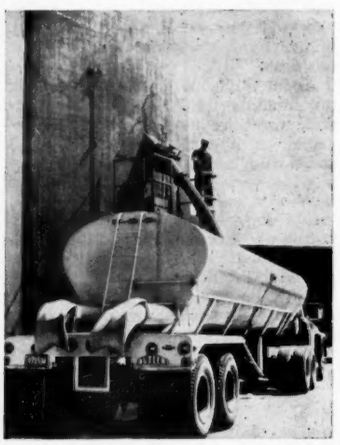
Fabricated Metals, Inc., announces a new high-clearance, self-propelled adjustable-width sprayer, designed in cooperation with Dr. Lauren D. Anderson of the University of California Experimental Station at Riverside,



Cal. The 75-gal. sprayer is used for both experimental and commercial applications of insecticides, fungicides, herbicides, weed killers, defoliants, and liquid plant food additions. The "Spray Rite" sprayer is used for seed crops, oil crops, flower growers, vegetables such as corn, lettuce, tomatoes, artichokes, celery, cabbages and sprouts as well as vineyards, and as a defoliant in cotton. It also can be used as a duster. The unit is self-propelled with a basic David Brown two-cylinder, air-cooled diesel tractor. The "Spray Rite" uses 1½ gal. of diesel fuel per full day's work, it is claimed. Wheel widths are adjustable by one man from 60 in. to 96 in. Check No. 6859 on the coupon and mail it to secure details.

No. 6860—Dry Bulk Transport

A new twin-screw unloading steel trailer designed to haul all types of heavier dry bulk material has been announced by the Butler Manufacturing Co. The "clean bore" interior of the trailer's 60° slope side walls is said to assure positive flow to the twin-screws and permit fast, continuous unloading without material hangout or bridging. Twin dual pitch 9 in. diameter screws are each 28 ft. 6 in. long and have 6 in. pitch the first 20 ft. for power unloading of the trailer even with a full, tightly packed load and 9 in. pitch on the rear 8 ft. 6 in. length provides speed and assures maximum rate of delivery, it is claimed. Check No. 6860 on the coupon and mail it to secure details.



No. 6858—Film on Plant Deficiency

The American Potash Institute announces a color film on signs of potassium deficiency in plants. The strip presents, the Institute says, typical potash deficiency symptoms in a number of field crops, vegetables, fruits, forage crops and some ornamentals. It is a single frame 35mm strip, the company says, with 22 pictures and script featuring such hunger signs as poor growth, leaf scorch, poor root development, weak and lodged plants, poor seed and fruit quality. For information about securing films, check No. 6858 on the coupon and mail to this publication.

Send me information on the items marked:

- ☐ No. 6856—Measuring Device Data Sheet
- ☐ No. 6857—Fertilizer Mixer Spreader
- ☐ No. 6858—Film on Plant Deficiency
- ☐ No. 6859—Sprayer
- ☐ No. 6860—Dry Bulk Transport
- ☐ No. 6861—Weed Killer Booklets
- ☐ No. 6862—Weed Control Movie
- ☐ No. 6863—Literature on Spreaders
- ☐ No. 6864—Weed Control Bulletin
- ☐ No. 6865—Fogging Machine
- ☐ No. 6866—Application Equipment Catalog
- ☐ No. 6867—Suction Strainer
- ☐ No. 7305—Moisture Balance
- ☐ No. 7312—Drum Cover Data Sheet
- ☐ No. 7314—Aluminum Bulk Trailer

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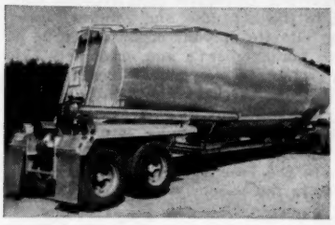
No. 7314—Aluminum Bulk Trailer

A hopper bottom, aluminum dry bulk trailer, designed to haul lighter weight materials such as feed, grain and fertilizer, has been announced by Butler Manufacturing Co. The transports are available in a choice of unloading models: A center unloading gravity dump model or a swivel



mounted auger model that discharges to the rear or either side of the trailer. Manholes are 30 in. by 72 in. and slide gate outlets are 24 in. by 42 in. For more complete information, check No. 7314 on the coupon and mail to this publication.

No. 6856—Measuring Device Data Sheet

A data sheet on the Fumiscope, a device for measuring the concentration of methyl bromide gas in a space under fumigation, has been released by the Robert K. Hassler Co. The data sheet contains information on how the instrument works, photos and illustrations of the instrument and a graph. Also included is a specification list containing size, weight range and other information. For copies, check No. 6856 on the coupon and mail to this publication.

No. 7312—Drum Cover Data Sheet

Drum covers to prevent dusting and contamination during automatic weighing of chemicals, powders and other materials are described in a product data sheet (5804), offered by Richardson Scale Co. The sheet explains how the drum covers operate plus how the automatic scale units operate with the drum cover being used. Optional arrangements for increased capacity are also listed. Photos and illustrations are contained in the sheet. For copies, check No. 7312 on the coupon and mail.

No. 6862—Weed Control Movie

A 12-min., 16 mm. full color and sound movie which describes modern weed control practices has been produced by the Stauffer Chemical Co. The film depicts the most efficient methods of applying both granular and liquid herbicides and illustrates the weed control efficacy of Stauffer's pre-emergence herbicide, Eptam. Also shown are a series of field tests which portray the increased crop yields which result from herbicide treatments. These include such acreage crops as corn, beans, alfalfa and forage legumes, beets and ornamentals. Prints of the film may be obtained on loan without charge. Check No. 6862 on the coupon and mail it to Croplife.

No. 6861—Weed Killer Booklets

Two folders reviewing "Diamond Fence Rider" and "Crop Rider Formulations" in handling a wide range of weed-killing and brush-control problems on farms have just been issued by the Diamond Alkali Co. Both folders also include handy, ready-reference wall charts covering specific weed and brush control problems, type of herbicide and quantity of solution required and time-tested application tips. Copies are available free on request. Check No. 6861 on the coupon and mail it to Croplife.

No. 6857—Fertilizer Mixer Spreader

Simonsen Manufacturing Co. announces a fertilizer mixer spreader. The 3C Mixer Spreader has a three-

compartment box mounted on a truck, each to hold one of the basic chemicals—nitrogen, phosphate and potash nutrients. Each compartment has its own endless conveyor belt of stainless steel construction, the company says. A control gate for each compartment allows exact flow of each fertilizer component, the company says. For complete information about this product, check No. 6857 on the coupon and mail to this publication.

NURSERY INCORPORATES

PATTERSON, CAL. — William Warriner has recently incorporated the Warriner Nursery Co., at 223 South Sixth St., here. James Mahaffery, Jr., is associated with Mr. Warriner in the enterprise which retails agricultural chemicals and other farm products.

PATHOLOGIST NAMED

FARGO — Dr. Donald J. Morton has joined the staff of the North Dakota Agricultural Experiment Station as assistant pathologist, and will devote most of his time to research on barley diseases. He will begin his investigations with studies of leaf and seed blights, along with work on root rots.

40 Areas of Oak Wilt Located in Maryland

COLLEGE PARK, MD.—Approximately 40 areas of oak wilt were located in an aerial survey conducted by the University of Maryland in the summer of 1958, announces Dr. L. O. Weaver, state plant pathologist, University of Maryland.

These areas were located in a region extending from Savage Mountain on the east side of Garrett County to the Fairview Mountain area in Washington County. The Department of Forests and Parks located the diseased areas and eradicated the wilted trees.

Oak wilt has not been found east of the city of Hagerstown. The disease has not spread east or west of the area where it was found in 1952. However, Dr. Weaver said, new areas of diseased oaks are found each year within the same borders.

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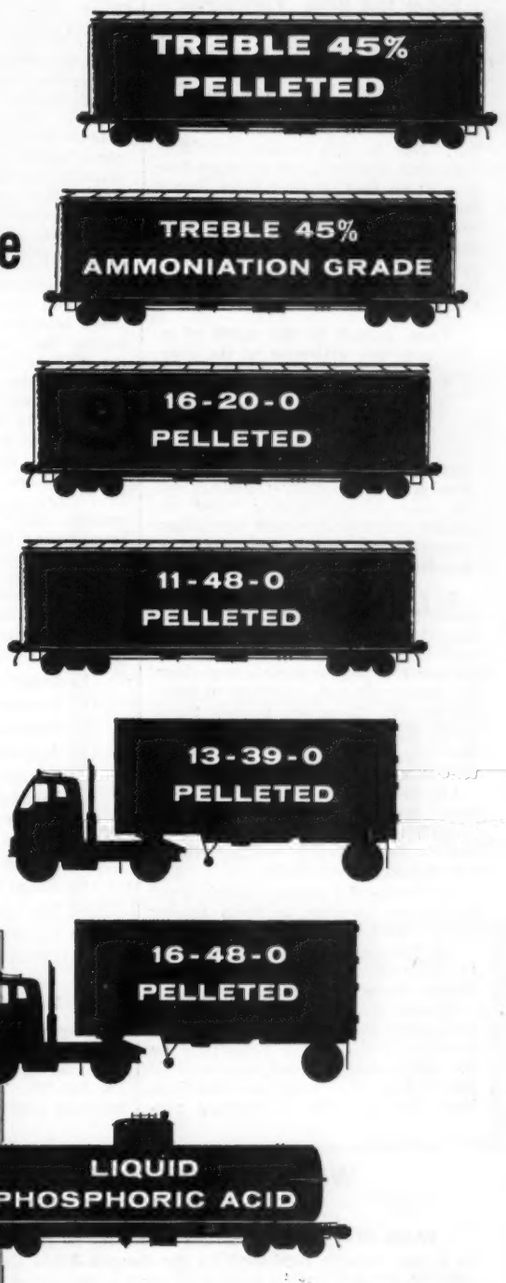
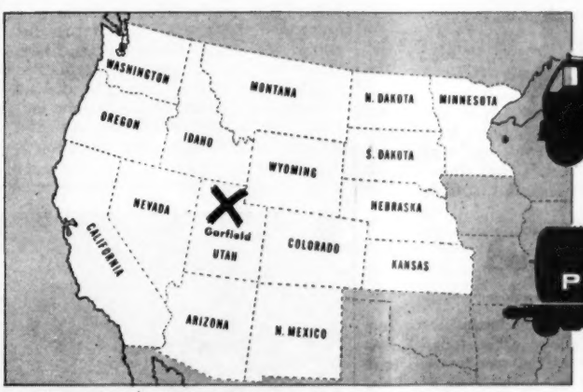
For full information, call any office of Wilson & Geo. Meyer & Co., Intermountain, sales agent for these 7 Anchor products. They will expedite your order.





Western Phosphates' plant at Garfield, Utah, is centrally located to serve all the west... fast!

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How to Manage for Better Morale

By MARTIN M. BRUCE
Vice President, Clark, Channell, Inc.; and Director, Personnel Research, Dunlap and Associates, Inc.
Stamford, Conn.

High morale and good performance very often go hand in hand, just as low output and frequent mistakes are factors often related to poor morale. High morale is the sum of a person's confidence in his organization, his on-the-job associates and in himself. Good communication from the top man down is at the heart of it.

Accidents, turnover, absenteeism, and grievances tend to be more common where morale is low. Personal selling and customer relations also suffer where negative attitudes exist. And as the boss, don't overlook the satisfaction—and extra profit—that comes with running an enterprise where esprit de corps is high.

From the Boss' Viewpoint

When people say that a firm has good morale they don't necessarily mean that everyone is on a first name, "buddy" basis. You can find top-drawer morale in companies where the boss is always "Mr." or "sir." Nor is high morale invariably the result of placid, low-pressure conditions; in fact, studies have shown that such an atmosphere can cause low morale. Getting the work out in any small concern facing tough competition is more than just a game. It is a serious job calling for effort and discipline.

Thus, morale is the spirit of a concern—the attitudes of its people. It is influenced more from the top down than from the bottom up. It is often more a matter of how the boss says "Good morning," than of whether or not people work without neckties. No single condition will consistently explain good or poor morale. It is a "mix" of many related elements operating together in a certain company at a particular time.

At the outset you should understand that your personal ways of interpreting actions and conversations may lead to false conclusions. Some factors relating to morale are clear, but others are not. Contrary to popular opinion, there are usually many kinds of reasons behind a person's feelings. Generally speaking, you can think of them in four groups.

(1) Reasons a person can talk about freely and objectively;

(2) Reasons a person talks about readily enough, but which actually are distortions of fact;

(3) Reasons a person doesn't want to discuss because he feels touchy about them; and

(4) Reasons a person is not able to talk about because he, himself, doesn't know they exist.

Groups (2), (3) and (4) are likely to involve much more emotion. The trouble is that most employees do not easily recognize and express their less logical reasons behind their feelings. Consequently, it becomes particularly important for the owner or manager of a small business to be aware of them. If he is, he will be more inclined to act on the basis of the significant underlying feelings which affect morale. Very often, the stated reasons for dissatisfaction are not the real ones.

What Goes into Good Morale?

The question, "What goes into making good morale?" brings up two points at the start. First, certain basic needs are shared by all people: food, shelter, safety, and acceptance. Second, the ways in which these needs can be satisfied will depend on education, previous experience, social relationships, age, and other factors. One authority emphasized the point that morale means different things to different people by stating: "There is no one need which is always Number 1 for all workers . . ."

Thus, different groups tend to emphasize different segments of the framework that makes for good morale. For example, lower and middle income groups place greater significance on security. Of prime importance to white-collar groups are self-expression, independence, and interesting experiences. Those in higher income brackets give greater weight to social approval.

Both at the very beginning of a vocational career and again in later years, morale tends to be better than during the middle period. Through the middle years, workers in jobs needing higher skills tend to demonstrate greater satisfaction. And having authority and responsibility tends to go along with better morale.

From the standpoint of the job itself, research has highlighted some 14 factors as important in building morale. This, of course, is only one breakdown; there are many others. Moreover, since they cover both sexes and all age ranges, all may not be applicable to one age or sex. Yet despite limitations, it is a very useful series. In order of their significance, then, the 14 are listed below.

(1) Security
(2) Interest
(3) Opportunity for advancement
(4) Appreciation
(5) Company and management
(6) Intrinsic aspects of job assignment
(7) Wages
(8) Supervision
(9) Social aspects of job
(10) Working conditions
(11) Communication
(12) Hours
(13) Ease
(14) Benefits

Many people put great stress on the importance of money in morale. But note: wages rank half way down the list. The fact is that financial incentives alone are not sufficient for producing top level morale. Once an employee's basic needs are satisfied through adequate pay, other nonmonetary aspects of the job take on ever-increasing significance. To be sure, people often say that wages are the reason for their taking extreme action. But investigation shows that lack of fulfillment of other less obvious, less rational needs is actually the prime cause in many cases.

For example, supervision is often a major factor in a store's morale. Employee-oriented supervisors usually get better results. Thus, the sales person who feels she is wanted and needed as a human being is more favorably disposed toward the supervisor. Consequently, her morale is higher, and she probably will do a better job.

Dirty wash rooms have been the basis for strikes. Granting bonuses instead of small pay raises has led to a strike. In another case, the building of partitions between certain job areas could have prevented labor strife.

Such instances should be seen in terms of emotional needs. When those needs are not fulfilled, there is frustration. Morale goes down. And if morale goes down far enough, people do something about it.

Therefore, it is worthwhile to watch closely for "unimportant" and "illogical" matters which influence morale. Also, try to stay alert to such factors as working conditions. Complaints about them may actually cover up a significant underlying problem such as fear of future changes.

Judging Present Morale

How good is morale in your firm today? To answer that question you must watch for events that prevent employee needs from being filled. "Such as what?" you ask. Examples are common. Take the case of the manager who contributes to poor morale by failing to investigate and scotch a false rumor that his shop is going to move. Or take the case of another manager who kept all information about the business to himself. He wanted to keep his competitors guessing, but he only hurt morale in his own firm.

Recognize too, that the varied groups in your organization—executives, supervisors, employees, part-time seasonal help and so on—do not share the same goals. Note the degree to which they overlap (or fail to overlap) the company's goals. For instance, "Secretary A" wants very much to get married. She wants a spot where she can meet and be with eligible young men. The firm, on the other hand, has a different goal—getting out the correspondence. As a result, they assign her where their need is greatest which happens to be in a back room. Then they wonder why her morale is low.

Against this background try to spot first of all the symptons which indicate the level of morale. High employee-turnover, absenteeism, grievances, complaints, gripes, and the like, tend to go with poor morale. So also do long faces, short tempers, hot arguments, and cold silences. The opposite conditions usually reflect good morale.

Therefore, take an objective look at the over-all organization. As "the boss," you may find this hard to do. You may, in fact, want to get some outside assistance. However it is done, a comprehensive procedure in evaluating present morale will include these steps:

(1) Size up the over-all "personality" of your company;

(2) Watch for ups and downs in morale;

(3) Check with your key executives to see how well their thinking conforms to your goals;

(4) Get objective views from your employees relating to the important factors in morale; and finally,

SUMMARY

Almost every working day the manager of a small store, wholesale house, and service business faces some situation related to morale. Managing for better morale aims at two related goals: Happier employees and selling more goods. There is usually a relationship between employee effectiveness and morale. Therefore, you should stay alert to the attitudes and general "feeling-tone" of your employees. The working climate of your organization as a whole plays a major part in morale—both management's and employees'. It will pay for you to keep tabs on new developments in morale research. A dangerous pitfall for many small marketers is thinking they have all the answers on why people do the things they do, why they feel the way they do, and how they will react in given situations. Human behavior is not simple. Often, it is not very logical. According to studies at the Survey Research Center of the University of Michigan, there are four key aspects of morale: (1) satisfaction in the job itself; (2) pride in the people you work with; (3) approval of pay scales and promotional opportunities; and (4) a feeling of belonging in the company. Of course, one factor may be more important than the others. But basically, morale is good when these four needs are being met, poor when they are not. This article was prepared with the cooperation of the Small Business Administration.

WEEDS TRANSPLANT OUTLAWS AS RANGE ROBBERS

Weeds have replaced rustlers as villains on Oregon rangelands, according to a new bulletin published by the Oregon State College extension service. "Where a tough outlaw gang once stole a handful of cattle, weeds now steal whole ranges," the new bulletin points out. Grass is the wealth on a ranch, it adds, and useless plants become robbers of soil moisture and fertility when allowed to increase and drive grass off range lands. Common sagebrush is listed as the biggest criminal on the state's open range country, with cheatgrass next and rabbitbrush third. Other problem grasses discussed in the bulletin include larkspur, Medusa head rye, goatweed, and Mediterranean sage. The bulletin explains how these weeds are able to encroach on valuable grass stands, and then tells ways to rebuild lands that have become weed infested. Delayed grazing, proper distribution of livestock, seeding of grass-alfalfa mixtures, and use of weed-control sprays are discussed and recommended. The bulletin, titled "Range Robbers—Undesirable Range Plants," was written by Oregon State College and U.S. Department of Agriculture range specialists.

THE HOME GARDEN NURSERY in Palo Alto, Cal., displays chemicals for lawn and garden and a variety of seeds in one area (left photo). In another area of the store, bulky items such as fertilizer, are kept (right photo).

(5) Go after supplementary information on matters of special importance in your operation.

To be sure, these are broad steps. Specific techniques vary from company to company. Most of them involve some type of interviewing and various sorts of questionnaires. As a practical matter, however, standardized surveys and related devices which are widely available can be put to good use no matter how small the organization. Note, also, the value of getting employee participation. Get your employees' help in suggesting changes and putting them into effect. Too often the boss gets into trouble for one reason: He decides—all by himself—what changes are needed to improve morale, and forgets that his employees want a share in shaping their own work situations.

The things employees say they object to are often not the real problems. This condition stems from the fact that most people tend to express dissatisfaction only in concrete terms. They are upset when they are "not paid fairly," or are "treated like children," or are "kept under somebody's thumb," or something of the kind. But emotions are abstract. They are much more difficult to put into words than salary or wages. Thus, a complaint about wages may actually be caused by a person's feeling that the boss is "sore" at him. In reality, of course, the boss may not be angry at all, but he may have done or said something which made the employee think he was. That's all it takes.

Unless you identify the real causes of poor morale, you may well go to work on the wrong problem. In determining the true state of morale in your business, you can get assistance quite readily and reasonably from professional psychologists. These specialists may be found in universities and consulting organizations. You can also get information from the American Psychological Association, 1333 Sixteenth Street, N.W., Washington 6, D.C.

Improving Employee Morale

No simple ground rules for improving employee morale can be offered. Every situation is unique. No two individuals are exactly alike, nor are two companies identical. Nevertheless, from psychological research on morale and attitudes in business, certain practical suggestions may be made:

(1) Tell and show your employees that you are interested in them and would be glad to have their ideas on how conditions might be improved.

(2) Treat your employees as individuals; never deal with them as impersonal variables in a working unit.

(3) Improve your general understanding of human behavior.

(4) Accept the fact that others may not see things as you do.

(5) Respect differences of opinion.

(6) Insofar as possible, give explanations for management actions.

(7) Provide information and guidance on matters affecting employees' security.

(8) Make reasonable efforts to keep jobs interesting.

(9) Encourage promotion from within.

(10) Express appreciation publicly for jobs well done.

(11) Offer criticism privately in the form of constructive suggestions for improvement.

(12) Train supervisors to think about the people involved insofar as practicable, rather than just the work.

(13) Keep your people up to date on all business matters affecting them, and quell rumors with correct information.

(14) Be fair.

Building Executive Morale

Executives have emotional needs, frustrations, and good or poor morale the same as other employees. The suggestions above for improving employee morale are generally applicable to supervisors and executives, too. In addition, however, some further ideas are appropriate to this latter group. Actually, they are more a matter of emphasis than of new information.

(1) Work together with your key man or men taking them into your confidence; let people work with you rather than just for you.

(2) Encourage mutual cooperation as well as individualism.

(3) Obtain agreement on the goals of your company.

(4) Educate your management group (even if it's only two or three people) to the goals of the company.

(5) Keep your managerial team informed on your plans and activities.

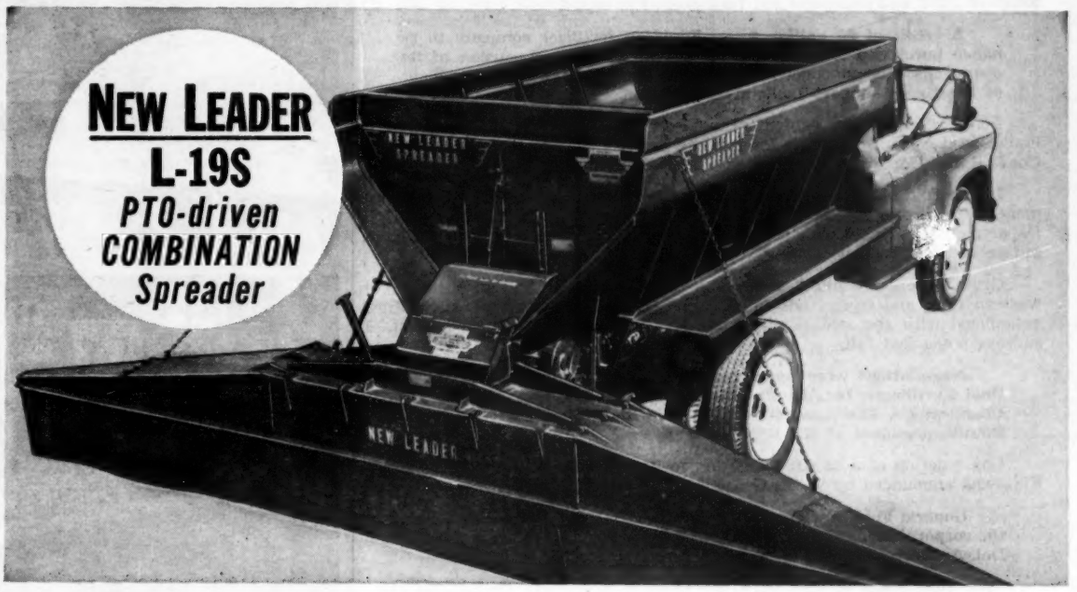
(6) Make lines of responsibility and authority clear.

(7) Specify the nature of relationships among executives—upper, lower, and equal levels.

(8) Give your executives clear-cut decisions.

(9) See that their privileges and office facilities are in keeping with their status.

(10) Provide equitable compensation.



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What's Been Happening?

This column, a review of news reported in Croplife in recent weeks, is designed to keep retail dealers on the regional circulation plan up to date on industry happenings.

The U.S. Department of Agriculture has reported that carryover stocks of pesticides on Sept. 30, 1958, averaged about 10% lower than on the same date in 1957. Larger carryovers of new materials than in 1957, especially organic phosphates and weed killers, were more than offset by shorter inventories of DDT and grain and soil fumigants, the report said.

A credit of $5 million to an Egyptian fertilizer company to finance purchases of equipment in the U.S. for an expansion of its operations was announced recently by Samuel C. Waugh, president of the Export-Import Bank of Washington.

Installation of new equipment at Fort Worth, Texas, to manufacture liquid weed control materials for railroad use has been announced by Pacific Coast Borax Co., division of United States Borax & Chemical Corp.

In the field of fertilizers, the top need is for research leading to development of fertilizers having controlled rates of nutrient release, said the U.S. Department of Agriculture's soils, water and fertilizer research advisory committee at its annual meeting in Washington recently.

Grasshoppers are likely to be more widespread, but less of a threat to western crop and rangelands in 1959, the U.S. Department of Agriculture announced with the release of figures showing the results of federal-state surveys made last fall.

Negotiations were completed Jan. 15 for the purchase of Deep-Root Fertilizers, Inc., Olathe, Kansas, by the American Agricultural Chemical Co. The announcement was made in New York by C. M. Powell, president of the AAC company.

Construction of a $500,000 addition to its fertilizer plant in Fort Pierce, Fla., was announced by W. R. Grace & Co. Chemical Division.

General Fertilizer Corp. has filed a charter of incorporation with the corporation department of the secretary of state's office in Dover, Del. Authorized capital stock of the firm is $10,000.

"We must keep in step with the farmers in helping them solve their problems and supply their needs," Dr. D. E. Wolf, the Du Pont Co., Atlanta, Ga., told more than 175 persons attending the Pesticide School at North Carolina State College in Raleigh recently.

Construction of SunOlin Chemical Co.'s $11 million urea plant at north Claymont, Del., is scheduled to start in March, 1959, and should go into operation by the end of the year, announced James I. Harper, SunOlin president. The 13½-acre site is adjacent to Sun Oil Co.'s refinery at Marcus Hook, Pa. Employment opportunities will be provided for about 40 persons.

The Alabama Soil Fertility Society, Inc., held its fourth annual meeting in Montgomery, Ala., and reelected Frank E. Boyd, southern agronomist for the Virginia-Carolina Chemical Corp., as president.

Mississippi Chemical Corp., Yazoo City, Miss., has announced plans for the construction of a $1.5 million urea plant at Yazoo City, said Owen Cooper, executive vice president. The plant will produce about 100 tons of urea a day.

U.S. Department of Agriculture scientists at Beltsville, Md., gave their blessing to a suggestion from Croplife that the heavy yields of crops in 1958 placed a heavy drain on basic plant food nutrients and that for the coming crop year prudent producers should reexamine their soil conditions, and prepare to reflect the drains on their soils with replacement values of plant food, reported John Cipperly, Croplife's Washington correspondent.

Consumption of fertilizers in the U.S. and territories of Hawaii and Puerto Rico during the year ending June 30 totaled 22,358,000 tons, a drop of 351,000 tons or 1.5% from that used in the preceding year, according to a preliminary report released by the U.S. Department of Agriculture.

Central Farmers Fertilizer Co. of Chicago shipped the first carload of rock phosphate from its Idaho phosphate works Dec. 19, according to announcement by Joseph L. Lanter, president of the company. The car was consigned to the Farmers Chemical Co., Joplin, Mo.

North Dakota Nitrogen, Inc., Bismarck, N.D., has been given approval to purchase government lignite piles at Garrison, N.D., according to Lynn W. Pine, Garrison district engineer.

American farmers have produced in 1958 an all-time record output of crops from the smallest planted acreage in 40 years, reported the U.S. Department of Agriculture in its annual crop summary.

Although production continues to exceed consumption, the situation in the world nitrogen market is not so pessimistic as statistics might indicate, was the opinion of Aikman, Ltd., London broker, in its annual year-end report on the nitrogen industry.

Present indications are that farmers will use more plant food in 1959 than at any time in the country's history, said Dr. Russell Coleman, executive vice president of the National Plant Food Institute. A combination of circumstances, Dr. Coleman said, is responsible for the optimism now prevalent in the fertilizer industry.

The U.S. Department of Agriculture felt that a possible slackening of farm income in 1959 could be seen by economists of the Agricultural Marketing Service, despite 1958's prices and farm income which averaged the best in five years. The economists felt that prospects are for continued heavy supplies of farm products generally, with wheat and feed grain supplies especially burdensome.

While the pesticide industry agrees that the Miller Amendment is a "good sound law," it believes that there can be developed some simplified procedures for determining toxicity and for registration of products for use in agriculture, J. V. Vernon, president of the National Agricultural Chemicals Assn., declared at a recent conference in Washington.

SUPERMARKET

(Continued from page 9)

ONE OF LOVELAND'S DELIVERY trucks (top photo) preparing to leave the storage area. This area houses the feed mixing section and storage of fertilizer and other lines, and delivery facilities. The truck can back right in to the building up to the wall that separates the sales area from the back room. Driveway is of concrete. The bottom photo shows part of the insecticide and farm remedy section maintained by the New Mexico store. Marvin Loveland is owner-manager.

credit, but I think the dealer should make his customers understand he has to meet his credit terms. This has worked very well for me. I check very closely on my customer's credit ratings before I'll give any. Surprisingly enough, this has meant many happy, profitable and pleasant dealings later on, too."

Some time back, Mr. Loveland noticed that when calling his company from the outside, that a good deal of the time he would get the busy signal. Cooperation from the telephone company by way of a gratis survey to determine the times of day when a customer's line is the least congested, proved the need for another line. With the second line he's found that much more delivery business can be obtained.

Speaking of delivery, the firm has two 1-ton trucks, a 1½-ton truck and a 2-ton truck. Deliveries are made on a 25-mile radius basis.

An inventory of from $15,000 to $18,000 is maintained at the store, not counting fertilizer and feed. Fertilizer stocks on hand run to about $15,000, Mr. Loveland says, and every effort is made to have an adequate stock on hand to meet seasonal demands.

Mr. Loveland figures the best way to get and hold business is to offer his customers real help in their problems. He feels he is in a position to advise the farmer and any information he has is available at all times.

Mr. Loveland is proud of the fact that customers as far away as 75 to 90 miles come to his store. "We like to feel it's because we try to take care of them the right way," he says.

"About the future," Mr. Loveland says, "it looks pretty bright. Our main purpose as a farm supply store is to help the customer with his problems. We want to keep him coming in—any time he needs anything—all year long."

SHOP TALK

(Continued from page 9)

use is not advised for vegetables.

Rutgers workers also have this advice to dealers who are asked whether labor can be saved by mixing herbicides with other pesticides: Mixing with other pesticides offers many attractions but should be approached with caution. The manufacturers' advice should be followed in all cases. Unless the dealer has specific information, he should not recommend mixing pesticides, Rutgers officials warn.

Make Employee Instructions Clear, Managers Urged

The importance of instructing employees carefully to make sure that they understand fully what is to be done should be realized by all farm store managers.

Even the most articulate person will occasionally say something that a listener will not fully understand or will misunderstand. Therefore, making instructions clear is absolutely essential if the employee is not to waste a lot of motion.

It may take a little time to tell an employee exactly what you want done but it may mean time saved in the long run. Employees should be encouraged to listen and to question. Likewise, the manager should do a lot of listening and questioning. There will be fewer misunderstandings if this is the policy.

Three points are worth keeping in mind: (1) There is no such thing as a silly question. (2) Nobody knows what you're saying except the person listening to you. (3) It is almost impossible to say something that everyone will understand.

Doing Business With

Oscar & Pat

When Oscar came home that night from the farm supply store, he found that Minnie had prepared a sauerkraut and baked sparerib dinner for him. This was Oscar's favorite. Sometimes he ate too much sauerkraut and this was hard on his lazy liver.

"Ach, Minnie," he said wiping his mouth with the napkin, "there is nobody who can make sauerkraut and spareribs like you. This is a dish."

Minnie smiled gratefully. It was so seldom that Oscar praised her, she did not know exactly how to take it. Now, a wave of rare courage swept over her.

"Oscar," she managed to say.

Oscar looked up suspiciously. "Yah?"

"The fertilizer business has been awfully good lately, you told me. Many farmers are placing orders for fertilizer and lime. Business is 15% better than last year."

Oscar frowned. "That is paper business only. That crazy Irisher has been runnink aroundt like madt tryink to sell more fertilizer. He's got the orders, yah, but, ach, you wait and see how much trouble we have collecting it. I know—I feel it in my bones."

"Oh, Oscar, must we always be like that?" Minnie asked. "Must we always expect small potatoes in the bottom of the sack? Must we always save the piece of string, because someday we may need it?"

Oscar was so surprised he laid down his knife and fork and stared at Minnie. In fact, he would not have been more surprised had Reverend Schaffschneider announced from the pulpit that there was no Hell.

"Why, Minnie!" he exclaimed, "what is the matter with you? Aren't you fellink well?"

"Oh, I get so tired cooking meals, meals, meals all the time, Oscar. Can't—can't we afford to go out once in a while? Tomorrow night the cafeteria has roast beef on—always on Thursdays, I found out. We can't afford to buy a big roast beef, just for us two. Please, Oscar."

Oscar frowned. He did not like such extravagance, this eating out, when one could eat so much cheaper at home. "The last time we ate out," he reminded Minnie, "you started to talk mit those farmers behindt us—and invited them to sit with us. Ach, and, and then that customer gives me the tickets for himself and wife, and four kidts. Ach, what a bill I hadt to pay."

"Oh, but I didn't know he would do that," almost cried Minnie. "That was nine months ago, Oscar. We haven't eaten out since. Can't we go this time? I—I just feel like going out for dinner."

Oscar sighed. "Ach, all right we will go. But don't talk to a single farmer you see in there. Make belief you don't know them. Then I will not get hooked with the tickets."

Minnie beamed. The January sales were on and she hoped that if Oscar would take her to the cafeteria, she could inveigle him to go window shopping with her afterward. She needed a few things. This might be a good time to get Oscar to loosen up a bit.

So the next night when Oscar came home from work, he found a bright, neatly dressed and vivacious Minnie all ready to accompany him. But Oscar was sort of grumpy. He and Pat had had a little argument about some calendars Pat had bought, and there was a carryover in Oscar's mind.

Down the brightly lighted street they went to the M. & M. Cafeteria. Minnie cast some quick glances at the beautifully trimmed store windows, but Oscar looked straight ahead.

"Now, Minnie," he cautioned, "remember, don't talk to farmers. It's all right to say, 'hello,' but then button your lips, take your food and go to a table."

"All right, Oscar," Minnie said submissively. "Oh, here's the cafeteria now. I can almost smell the roast beef." They were about to enter the cafeteria, when Oscar grabbed Minnie's arm.

"Ach, quick, look at this store window!" he said excitedly, almost dragging Minnie to a window.

"W—what's the matter?" Minnie asked in alarm.

"Matt Hosley's comin'," Oscar hissed. "Him and his wife and five kidts. Ach, I don't want them to hook me for a meal!"

They stood staring at the window. Then a hand touched Oscar's shoulder. "Lookin' at a window filled with baby shoes, eh? By golly, Oscar, so Minnie's expectin' after all these years. Well—I'm glad to hear it."

Oscar swung to make an angry retort, but Matt Hosley's big grinning face stopped him. "That's okay, Oscar, I know how you feel. I felt that way myself when my first one was born. Boy, you'd better sell more fertilizer now. It costs money to raise kids."

With that remark, jovial Matt Hosley, his wife and kids went into the cafeteria.

Minnie's face was strangely averted, but Oscar was fuming. "That smart aleck!" he growled. "Ach, what remarks he makes. Well, now we can go in. I don't see anybody else coming. We'll be the last in the line."

And they were, for the moment. Minnie's eyes glowed as she took roast beef, parsley buttered potatoes, salad and beets. She took three rolls, for she loved rolls.

When Oscar, who was behind Minnie, saw this, he walked up and took two rolls from her plate, leaving but one, and then he went back to get his tray.

However, a heavy set man who had come up behind Oscar was now quite nettled at this delay in service. So he picked up his full tray and stepped past the arguing Oscar and Minnie and went to the cashier at the front of the line.

The cashier rang up the sale and then exclaimed. "Oh, you got a ticket with a star on it. That means you have a free meal."

"Who, me?" grinned the heavy set man. "Gee, this is my lucky day." He went with his tray to a table.

As Minnie stepped up with her tray, the kindly cashier looked at her. "Too bad you didn't hurry," she smiled. "If you had, you would have had a free meal. You'd have gotten the ticket with the star on it."

Oscar glowered at Minnie and her face went pale. Silently they went to a table.

"Ach," Oscar said sharply attacking his roast beef. "If you hadn't filled the plate with biscuits so I hadt to take some back, you would not have had to pay for the meal."

"And if you hadn't—" Minnie began, then broke off.

The roast beef tasted like leather, and Minnie knew now that the day which had promised so much, was dull and gray like all the rest. All because she had not won the free meal.

FARM SERVICE DATA

Extension Station Reports

Ranch operators are taking to the air to fertilize sparsely grazed western rangeland.

Aerial application of nitrogenous fertilizer to obtain additional livestock use of lightly grazed rangeland was highly recommended at a recent Western Range Fertilization Conference by Dr. Dixie Smith, Wyoming University agronomist.

"A significant increase in forage utilization on aerially fertilized areas has been shown from experimental studies conducted in the Big Horn Mountains of Wyoming in 1956 and 1957," according to Dr. Smith. The Big Horn treated areas were fertilized at the rate of 67.5 lb. of nitrogen an acre.

Dr. Smith pointed out that one of the most taxing management problems facing the rancher today was the maintenance of the uniform use of rangeland. "Each year," he said, "vast amounts of usable forage remain untouched by grazing animals."

Increased forage production also results from aerial fertilization, the agronomist reported. "Forage production on our fertilized experimental plots averaged 1,899 lb. of ovendry forage; that on unfertilized plots only 1,419 lb.," he said. "This amounts to an increase of almost 800 lb. an acre, a substantial increase."

Forage production figures quoted by Dr. Smith were based on an experiment conducted at Big Horn during the past year. The Big Horn study plots are located at approximately 9,000 ft. where the average annual precipitation is about 25 in.

"The use of aerially broadcast fertilizers by private ranch operators or federally administered lands may well become as generally established as the spraying of big sagebrush," Dr. Smith declared, "if adequate economic data is supplied." He is now in the process of organizing a controlled grazing study for this purpose.

★

Over the past three years the Montana experiment station has made some tests to determine the results of applying nitrogen fertilizer to old established irrigated pastures. The grasses in the pasture used for the experiments were mainly Kentucky bluegrass and orchardgrass.

When fertilized with 800 lb. of nitrogen the yield was 5¼ tons of dry matter or about 6,600 lb. of total digestible nutrients an acre. By comparison, unfertilized pasture yielded about 1½ tons of dry matter or 1,700 lb. of TDN an acre.

The Montana researchers found, however, than an application of 400 lb. of nitrogen was the most economical rate of application even though the yield of dry matter and TDN was a little less than for the heavier application. It was also found that the application of 400 lb. of nitrogen in two units—200 lb. in April and 200 lb. in July—was more efficient than applying it all at one time.

Trade Winds From California

SEBASTOPOL, CAL.—Harry Sumigawa has opened the Sumigawa Nursery to retail farm chemicals and other products, at 4700 Blank Rd., Sebastopol.

●

SONOMA, CAL. — The Sonoma Nursery has been opened at 10 Leveroni Drive, Sonoma, by Pietro D. and Myrtle J. DeMare, retailing fertilizers and insecticides and other farm and garden products.

●

ALBANY, CAL.—Leland S. Campbell has opened the Campbell Garden and Farm Supply Co. at 943 San Pablo Ave., Albany.

●

FRESNO, CAL.—G. N. Sadler and J. M. Christensen have incorporated their fertilizer distribution firm under the name of Sadler and Christensen, located at 2735 East Norwich, Fresno.

●

RIVERBANK, CAL.—The Chemical Fertilizer Co. will erect an addition to its processing plant on Patterson Rd., Riverbank, with an investment estimated at $2,000.

●

WASCO, CAL.—The Wasco Town and Country Nursery is the name of a new retail outlet opened at 2200 Seventh St., Wasco, by Fred M. and Viola S. Henley.

●

MODESTO, CAL.—Amos Linscott is now a general partner and Carrie D. Dyer a limited partner in the fertilizer processing firm of Amos Linscott and Co., Modesto.

●

PETALUMA, CAL. — Thomas J. Ellis, Sr., a partner in the Petaluma Fertilizer Co., died during January after many years with the processing firm. His son, Thomas, Jr., surviving, continues to operate the business in conjunction with the third partner, his brother George Ellis.

●

FRESNO, CAL.—Henrietta's Nursery is the name given to a new farm and garden supply store owned by Jerry K. and Silvia M. Hardaway, at 1345 North Brawley, Fresno.

●

MILPITAS, CAL.—Joseph C. Pedulla and John T. Jamieson have opened the Milpitas Nursery Co. at 30 Main St., Milpitas.

●

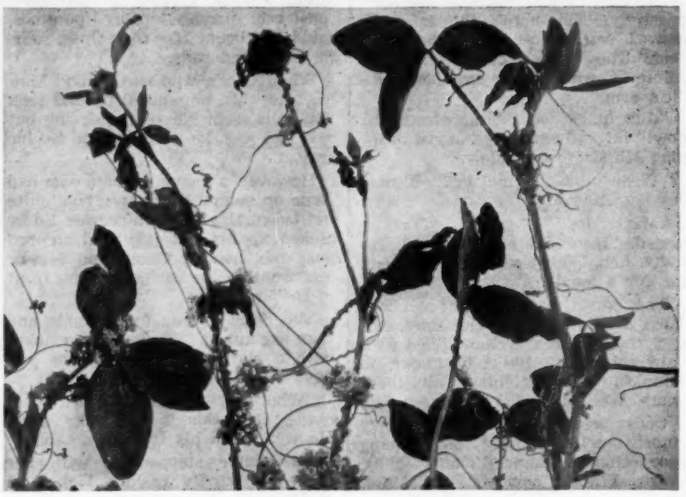
GRASS VALLEY, CAL. — C. E. Parsons and Merna L. Goerz have joined partnership with Felix Gillet in the Felix Gillet Nursery in Grass Valley.

●

WINTON, CAL.—Winton Fertilizer Spreaders, Inc., was incorporated in Winton in mid-January with a capitalization of $25,000. Principal owners of the firm include Ethel Kennedy of Atwater, Robert Y. Tanji of Winton, and Lyndell Mocaby, also of Winton.

WEED OF THE WEEK

Mr. Dealer—Cut out this page for your bulletin board



DODDER

How to Identify

When it becomes large enough to be noticeable, dodder is a slender, twining parasitic plant with long curling leafless stems. Color of the stems are usually yellowish or orange, but are sometimes tinged with red or purple and occasionally are almost white. The tiny flowers occur in massed clusters from early June until the time of frost. Small gray-to-reddish-brown seeds are produced abundantly, a single plant being capable of maturing upwards of three thousand. Seeds ripen from July until frost, but during occasional adverse seasons no flowers are formed.

Losses Caused by Dodder

This is a parasitic plant, infesting clover and alfalfa chiefly. However, a number of other cultivated crops are subject to infestation by dodder. The most important of these are sugar beets, onions and flax. Its appearance in the U.S. is noted in all regions in which clover and alfalfa are raised for seed. The USDA says that although dodder is a noxious weed, it is not to be feared in the U.S. to the degree that it has been in Europe. In the latter place, particularly in parts of Germany, production of clover seed is known to have been abandoned because of this parasitic plant.

Life History of Dodder

All dodders reproduce from seed. After germination, the seed uses up all its stored-up food in the production of the slender shoot. This leafless, nearly rootless stem rotates until it comes in contact with a congenial host, such as clover. (Some species may attack almost any plant growing in the field.) It leaves this temporary host as soon as it can climb within reaching distance of nearby clover or alfalfa. In case a suitable contact is not established, the temporary stem lies dormant on the soil for four or five weeks and then dies. When a suitable host is encountered, however, the dodder encircles it and obtains nutrition by sinking minute suckers into the food-conducting tissues of the host and stealing its food. The base of the dodder soon shrivels and dries, thus losing all connection with the ground. As the plant grows, it reaches for neighboring host plants and moves out in an ever-increasing circle of infestation. The clover plants first attacked die, as does the dodder feeding on them, but the parasite living on newly-attacked clover continues to live and to drop seed which soon germinates and continues the attack.

Control of Dodder

Chemicals may be used in controlling this parasitic weed, but local authorities should be consulted before any herbicide is applied on crops to be used for feed, forage, or for human consumption. Cultural means of control have been suggested by USDA, with different recommendations being made for various species of the weed. When fields become so infested that no other method of control is apparent, burning is said to kill not only the existing plants, but also seeds that are lying on the ground.

Illustration of Dodder furnished Croplife through courtesy of U.S. Department of Agriculture, Beltsville, Md.

H. Theodore Koenig

NAMED PRESIDENT—H. Theodore Koenig has been elected president of the Carbola Chemical Co., Natural Bridge, N.Y., announced the firm's board of directors. Philip V. Clonan was elected secretary-treasurer.

Grumman to Demonstrate Duster in Latin America

BETHPAGE, N.Y.—Grumman Aircraft's agricultural biplane, the "Ag-Cat," a crop duster and sprayer, will begin an extensive tour of Latin America, according to an announcement from the home office here.

The plane will be flown by the firm's chief pilot to Mexico, Guatemala, El Salvador, Honduras, Nicaragua and Costa Rica, where the craft's spraying and dusting capabilities will be demonstrated, the company said.

NAMED SOILS SPECIALIST

ST. PAUL, MINN.—Merle V. Halverson, for the past two years a University of Minnesota soils research worker, has taken up duties as a soils specialist for the state agricultural extension service. Mr. Halverson will work with other extension soils men, county agents and farmers on soil management and improvement. He is a graduate of the university's Northwest School of Agriculture at Crookston, earned a B.S. with distinction from the university in 1956 and last month completed work for his M.S.

William P. Brashear

JOINS U.S. POTASH — William P. Brashear has joined U.S. Potash Co., announced John E. Fletcher, vice president. Mr. Brashear graduated from Texas A&M College in 1954 and after a hitch in the army, joined the sales organization of National Potash Co. In his duties, Mr. Brashear will work with Bill Crady in representing U.S. Potash in its southwestern territory.

Research Grants Given University of California

BERKELEY, CAL. — Several federal and California state agencies made large donations to the division of agricultural sciences at the University of California here to promote various research projects in the field of agricultural chemicals and insect control.

From the U.S. Public Health Service came several grants allocated for specific purposes. Among these are one donation of $13,482 for insect virus studies; $7,990 for research on the dynamics of arthropod populations; $17,181 for research on the influence of microenvironments on insects, and $8,031 for research on the nature of infectious processes in insects.

The California Department of Fish and Game gave the largest single gift, totaling $38,775, for research on brush removal on game ranges and chemical applications. The California Department of Natural Resources forwarded $8,825 for soil-vegetation studies, and the U.S. Atomic Energy Commission gave $21,592 for research on soils containing salts and radioactive elements.

Private donations came from the California Spray-Chemical Corp. in the amount of $2,950 for fundamental research on phosphates in soils; from the Diamond-Gardner Corp., $3,500 for research on bacterial infestation in Ponderosa pine logs and lumber, and $500 from the National Science Foundation for research in agricultural biochemistry.

The California Olive Advisory Board gave $4,000 for research on various rootstocks and diseases peculiar to olive trees; the Herman Frasch Foundation made its eighth grant of $2,500 for research on the effect of environment on the chemical constitution of plants in relation to disease and pest resistance. The National Science Foundation made a second donation of $3,500 for research on a revision of the nematode subfamily Hoplolaiminae. Three other smaller gifts complete the cash grants for the month. They are from the California Spray-Chemical Corp. in the amount of $2,000 for research on insect control problems; the American Chemical Paint Co. in the amount of $1,500 for research with 3-amino-1,2,4-triazole as an herbicide, and $250 from the Shell Chemical Corp. for research on the toxicity of fiberboard panels treated with dieldrin to silverfish, beetles and cockroaches.

Phillips Awards Grant For Montana Experiment

BOZEMAN, MONT.—A grant of $2,000 to assist in research on the use of nitrogen fertilizer for corn has been given the Montana Agricultural Experiment Station, Montana State College here, by Phillips Petroleum Co.

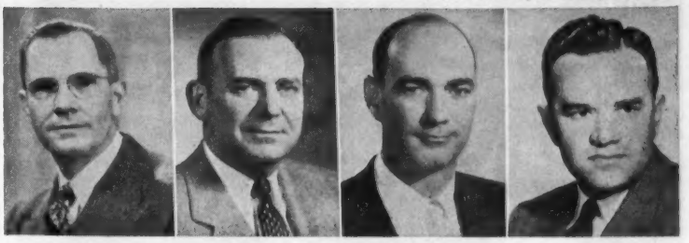
Dr. A. H. Post, head of the agronomy and soils department, said that few experiments have been conducted in which the amount of fertilizer applied has been the main variable, although research has shown that corn is among the crops which are most responsive to fertilizer.

Appointed Sales Agent

NEW YORK—The Western Peat Company Ltd. of Canada has appointed Faesy & Besthoff, Inc., New York, as exclusive sales agent in the Atlantic area for "Sunshine Brand" Peat Moss.

OKLAHOMA FERTILIZER SALES

OKLAHOMA CITY, OKLA.—Fertilizer sales in Oklahoma during the quarter ending Dec. 31, 1958, amounted to 25,438 tons, reported Parks A. Yeats, director, Seed, Feed & Fertilizer Division, Oklahoma State Department of Agriculture.



John A. Brewster | William N. Brock | H. B. Rue | John A. Book

CHASE BAG ELECTS—Chase Bag Co. has announced the election of its officers at a meeting of the board of directors. Among those elected were: John A. Brewster, named a vice president and director of West Coast operations, he will continue to function in his present capacity as manager of the Chase branch in Portland; W. N. Brock, formerly vice president and general sales manager, elected vice president and director of sales; H. B. Rue, formerly sales manager of the textile division, elected vice president and general sales manager, succeeding Mr. Brock; John A. Book, elected vice president and director of industrial engineering and labor relations. Mr. Book was formerly director of labor relations.

E. S. Elgin | E. K. Ludington, Jr. | R. H. Ayers | F. H. Ludington, Jr.

OFFICERS NAMED—Among the officials recently elected by Chase Bag Co. were the following: E. S. Elgin, vice president of the plastics division, formerly sales manager of the specialty division; Elliot K. Ludington, Jr., elected executive vice president, formerly vice president of the paper bag division; R. H. Ayers, elected vice president of the paper bag division, formerly sales manager of the paper bag division; Francis H. Ludington, Jr., elected vice president and treasurer, succeeding Charles S. Sheldon, who will retire on March 1. Mr. Ludington has been vice president in charge of production.

Addition of All Operators To Loss-Statement Bill Asked in California

SACRAMENTO, CAL.—Paul Bryne, state senator from Butte County, has introduced a bill in the State Legislature making the requirement for filing a statement of loss due to pest control operations applicable to all operators rather than only pest control operations with aircraft.

The bill provides for filing such a report with the county agricultural commissioner of the county in which the loss occurred. The report must include the name and address of the claimant, the type, kind and location of property allegedly injured or damaged, the date of the alleged injury or damage, the name of the pest control operator allegedly responsible and the name of the owner or occupant of the property for whom the pest control operator was rendering services.

California Halts Mexican Fruit Fly Controls

SACRAMENTO, CAL. — The Bureau of Entomology, California Department of Agriculture, reports that bait spray activities for control of the Mexican fruit fly along California's southern border have been halted for the season.

Current work consists of trapping operations and inspection of host fruits. No flies were collected in December.

GOVERNOR'S REQUEST

SACRAMENTO, CAL.—An end to state subsidies to most of the local mosquito abatement districts in California was recommended by Gov. Edmund G. Brown in his budget message to the legislature. Of 45 such districts in the state, 25 have received state funds in the past. Gov. Brown said elimination of state funds to districts except those taxing at the maximum 40¢ per $100 valuation would save California $390,000 in the next fiscal year.

INTRODUCES BILL

SACRAMENTO, CAL.—Frank Belotti, assemblyman from Eureka, has introduced a bill in the California Legislature at the request of the California Department of Agriculture to eliminate the requirement that hearings must be held in Sacramento and Los Angeles prior to adoption by the director of agriculture of rules and regulations pertaining to use of injurious materials in pest control or other agricultural operations.

Griffin J. Baker

NEW PRODUCTS MAN—Griffin J. Baker has joined the research and development department of McLaughlin Gormley King Co., Minneapolis, where he will be concerned with the development and promotion of new products in the company's insecticide line. Mr. Baker received an entomology degree from the University of Illinois in 1940. Prior to joining McLaughlin Gormley King, he was employed by Standard Oil Co., and more recently by Niagara Chemical Division, Food Machinery and Chemical Corp.

HEAD NORTHWEST GROUPS—Shown in the top photo mapping plans in ever-waging war against insects are officers of 33rd annual Western Cooperative Spray Project following final business meeting at Portland, Ore. Ralph Downing, seated left, Summerlin, B.C., Canadian Department of Agriculture entomologist, new chairman, grins at out-going chairman, Harold Madsen, Berkeley, University of California entomologist. Anton Horn, rear left, Boise, University of Idaho entomologist, is group's secretary-treasurer while Floyd Ellerton, Hood River, Oregon State College branch experiment station, is vice chairman.

In the center photo George Kitzmiller, left, Portland, with Pacific Supply Cooperative Assn. and outgoing chairman of Northwest Agricultural Chemicals Industry conference, congratulates John T. Coke, also Portland, following his election as chairman for coming year. Mr. Coke is with Naugatuck Chemical Division of U.S. Rubber Co.

The Pacific Northwest Vegetable Insect conference members elected the three entomologists in the lower photo to lead them this year. Charles Doucette, from left, Sumner, Wash., U.S. Department of Agriculture research entomologist, succeeds Robert W. Every, Corvallis, Oregon State College extension entomologist, as chairman. Co-chairman is Roland Portman, Moscow, Idaho, University of Idaho extension entomologist, while Howard Dorst, Logan, Utah, USDA research entomologist, is secretary-treasurer. A story of the conference appeared on page 1 of the Feb. 2 issue of Croplife.

Advance Work Started For Nuclear Blast In Potash Area

CARLSBAD, N.M. — Drillers are completing a hole 1,200 ft. in depth in the potash beds 25 miles southeast of here for preparatory tests leading to a proposed nuclear blast.

Shortly after Brinstool Drilling Co. of Carlsbad completes the hole, a 200-lb. charge of conventional explosives will be set off at the bottom of the hole. There are also plans for conventional shots of one ton and ten tons.

The shocks of these explosions are to be carefully measured to see if a close forecast can be made of the shock generated by the proposed nuclear charge—which would be equivalent to 10,000 tons of TNT.

Test instruments will make recordings in nearby potash mines to make sure that the larger explosions do not damage mining operations. The International Minerals & Chemical Corp. mine and mill and the U.S. Potash Co. mill are only seven to eight miles away from the test site.

The tests, called Project Gnome, are part of the Atomic Energy Commission's Plowshare Program to explore peacetime uses of nuclear explosions. The potash site was chosen because of the purity of the saltbeds and the detailed knowledge of geologic structure gained from oil and potash drilling.

It is thought that the nuclear shot will melt the underground salts and that this molten mass will hold heat for a sufficiently long time to be tapped by pipes to carry steam to a conventional power generator.

Crabgrass, Weed Control Being Tested by Dow

MIDLAND, MICH. — Agricultural research laboratories of the Dow Chemical Co. here are testing a pre-emergence herbicide which the company feels "may prove effective for control of weeds in farm crops and crabgrass in turf.

"Applied prior to the crabgrass season, the compound promises to prevent growth of the weed. The new material also shows promise for control of other turf weeds such as muhlenbergia and chickweed," a Dow spokesman said.

In addition to meeting turf weed problems, he continued, the new compound also promises to be useful as a pre-emergence or early post-emergence weed killer in crops such as soybeans, cotton, corn, snapbeans, peanuts, and peas.

The compound is undergoing further research trials and as yet there are no stocks available for sale or general sampling. The compound does not yet have a name. The material will be given further laboratory and field testing by Dow this coming year and will be sampled to public research agencies for further testing, the spokesman said.

Henry E. Wessel Joins Stauffer Chemical Co.

NEW YORK — Henry E. Wessel has joined Stauffer Chemical Co. as assistant director of the market development department. He will be headquartered in New York.

Mr. Wessel was formerly manager, staff services at Virginia-Carolina Chemical Co. He is a graduate in chemical engineering of Illinois Institute of Technology and is a member of the American Chemical Society, Chemical Market Research Assn. and Commercial Chemical Development Assn.

NEW MANAGER

OROFINO, IDAHO — Bud Samsel has assumed management of the Orofino Grain & Feed Co. He was formerly engaged in the fertilizer business for 11 years in Craigmont, Idaho. Former manager was Perome Peer.

Chemical Control Of Grain Rusts Seen by Scientists

ST. PAUL, MINN.—A trio of agricultural scientists have agreed that chemicals may very likely be used some day to help control rust diseases in grain crops. But they added that, while the scientific principle for this type of control already is established, there are things that may delay its use. First, the "rust disease eradicant" chemical that appears at present to have the best potential has not been cleared for use, since it is not known whether it will leave toxic residues. Second, there is a question of how growers will accept the added cost of chemical treatment.

The three scientists drawing these conclusions were William Q. Loegering, U.S. Department of Agriculture plant pathologist; F. R. Forsythe, Canada Department of Agriculture Science Service, and Gordon Brandes, of a chemical concern. These men were speakers at the conference of chemical control of cereal rusts, held Jan. 26-27 at the University of Minnesota, St. Paul.

Mr. Forsythe said Canadian tests have shown that it is technically possible to get protection from rust in wheat by spraying a mixture of nickel chloride—an "eradicant"—and Zineb, a standard disease protectant being used on horticultural crops. This treatment will protect the crop for about 10 days.

University of Minnesota research has shown that using these two materials together gives longer protection than using either one alone. Nickel chloride by itself is effective for two or three days and Zineb for five to seven.

Tests show these treatments work equally well against stem rust and leaf rust of wheat and crown rust on oats.

Of the two chemicals, only Zineb has been approved by the Food and Drug Administration. The nickel compound has not been cleared and at present it's still a question whether it will, the scientists said.

As it is not yet known which compound will be used by farmers, it is hard to tell just how much chemical treatment would cost but it is generally agreed that in the years of rust epidemic grain producers could afford $4 to $5 an acre for treating if it would make an 8 or 10 bu. an acre increase in yield, the scientists said.

Davison Seeks Permanent Insecticide Registration

BALTIMORE — Application for permanent registration of Dri-Die Insecticide 67 has been made to the U.S. Department of Agriculture by W. R. Grace & Co. Davison Chemical Division. If granted, this will enable commercial marketing of the product, which currently is available only in experimental quantities.

In making the application, Davison listed the ingredients at 100% active, comprising silica gel and ammonium fluosilicate. The presence of the latter chemical has not been disclosed previously because of patent consideration.

In recent months, widespread field tests of the new product have been made by pest control operators as well as research institutions, and Davison said it felt that results have warranted the decision to seek permanent registration and to make preparations for national marketing.

The silica gel in Dri-Die, in the form of a very light powder known as aero-gel, with desiccant qualities, is understood to kill insects by attacking the essential outer waxy layer. Since this is a physical action, researchers believe that the pests may not acquire tolerance for the product, Davison said.

Clyde A. Bryant

Dow Announces Three Sales Staff Changes

MIDLAND, MICH.—Three changes in agricultural chemical sales personnel of the Dow Chemical Co. have been announced by W. W. Allen, sales manager for agricultural chemicals.

Clyde A. Bryant has been named manager of the merchandising section, Robert O. Fletcher becomes an area coordinator for farm product sales and John H. Prine has been named staff assistant to the sales manager.

Mr. Bryant has been with Dow since 1948 when he became a field technical representative based in Ithaca, N.Y. In 1951 he was transferred to agricultural chemical sales in Midland and placed in charge of new agricultural products. Later he became product manager for herbicide products and recently has acted as coordinator of farm product sales for the eastern third of the country.

As merchandising manager, Mr. Bryant will be in charge of planning and coordinating sales promotion programs for agricultural products.

Mr. Fletcher has been attached to the Seattle sales office, handling all Dow agricultural products, since joining the company in 1954. In his new job, he will be based at company headquarters in Midland, and will act as farm product sales coordinator for the northeastern sector of the country.

Mr. Prine will work with business analysis and statistical reporting as staff assistant to the sales manager. He has been with Dow since 1942.

Norwegian Rats Infest Two More Oregon Counties

PORTLAND, ORE.—A heavy infestation of Norwegian rats in two eastern Oregon counties has been reported by the State Board of Health. William B. Culham, district sanitarian for the board, said the infestations were found in at least two Union and Malheur county communities last year.

The board said this marks the first time the Norwegian rat—labeled "one of the most destructive byproducts of civilization"—has been found in large numbers in any eastern Oregon area outside Umatilla County.

NEW MEXICO HARVEST

STATE COLLEGE, N.M.—The total farm value of major crops produced on New Mexico farms in 1958 exceeded the 1957 figure by almost $20,000,000, according to figures released by the New Mexico Crop and Livestock Reporting Service. Cotton lint valued at $54,585,000 accounted for over half of the total worth of all crops which amounted to $104,469,000. Production of lint cotton for 1958 is estimated at 300,000 bales, 27% more than in 1957. Indicated yield per acre for 1958 is 818 pounds which exceeds the 1957 yield by 199 pounds and the previous 1956 high by 21 pounds.

Fight Against Smut Saves Northwest Grain Growers $2.5 Million

PORTLAND, ORE. — Pacific Northwest wheat growers pocketed an additional $2.5 million in 1958, thanks to agricultural research.

Less than 4 million bushels of the 1958 wheat crop in Washington, Oregon and northern Idaho graded smutty as compared to 17 million bushels in 1957. Percentage of wheat grading smutty dropped to 2.5 for the 1958 crop compared to 16% for 1957.

Monetary loss due to smut in 1958 was scaled down to less than half a million dollars as compared to $3 million in 1957.

This progress report was made here by Dr. C. S. Holton, USDA plant pathologist stationed at Washington State College in Pullman, to a regional extension smut-control committee meeting composed of U.S. Department of Agriculture and land-grant college plant pathologists and representatives of the trade.

Dr. Holton said new smut-resistant wheat varieties and a recently developed smut-killing seed treatment are largely responsible for the big gain in the battle against smut.

The new wheats and the seed treatment were both developed in agricultural experiment station laboratories supported jointly by Washington State College, Oregon State College, the University of Idaho and the USDA.

The 1958 reduction in smut incidence and losses was made in the teeth of the most favorable weather in many seasons for spread of the disease, Dr. Holton said. Without the built-in resistance of such varieties as Omar, Burt, Columbia and Brevor, and the hexachlorobenzene seed treatment for added safety, smut infestation could have been the heavieset in years, he said.

Dr. Holton's figures are based on a survey of smut prevalence in the 1958 crop in the Pacific Northwest. Over 65 million bushels of wheat representing 28 varieties were sampled through the cooperation of the Pacific Northwest Grain Dealers Assn.

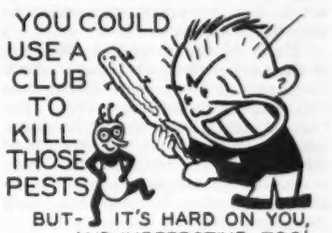
The survey sample was slightly less than half the total wheat production of 142,283,000 bu. in the three Pacific Northwest states.

Elmar, represented by over 5 million bushels, had 13.4% grading smutty. It was followed in turn by Hymar, 8.4%; Golden, 6.1%; Ridit, 5.4% and Elgin, 5.1% grading smutty.

Omar was first in total volume of wheat produced, with over 33 million bushels. Per cent grading smutty was 1.2. Omar was the leading wheat variety in all three states.

The resistant group of wheat varieties was represented by about 53 million bushels, of which only about 1% graded smutty. This contrasts with percentages of 19.8 aand 35.6 in 1957 and 1956 respectively. This marked reduction was due mainly to the shift to Omar and Burt from Elmar.

A USDA grain division report on smut also made at the meeting differed from Dr. Holton's by 3.4%. It showed that 5.9% of the sample inspections of wheat grown in the three states graded smutty as compared to Dr. Holton's figure of 2.5% of the total bushels grading smutty.



A BROYHILL SPRAYER CAN SAVE THE DAY, AND KILL THOSE PESTS THE EASY WAY! THE BROYHILL CO.-DAKOTA CITY, NEBR.

Books on Fertilizers And Their Use

FOREST FERTILIZATION
Donald P. White and Albert L. Leaf

A bibliography, with abstracts, on the use of fertilizers and soil amendments in forestry. Useful to those interested in prospects of a plant food market in forest areas, the book resulted from a special two-year study at the college of forestry, Syracuse University, Syracuse, N.Y., under sponsorship of the Nitrogen Division of Allied Chemical & Dye Corp. The book contains 300 pages, 700 references, with abstracts, and covers the period from 1865 through 1956. Includes the use of fertilizers in forest management **$3.00**

SOIL FERTILITY AND FERTILIZERS (1956)
Samuel L. Tisdale and Werner L. Nelson

An advanced college text, for juniors and seniors, following backgrounding course in soils. Covers elements required in plant nutrition, their role in plant growth, and the soil reactions to these nutrients. Several chapters on manufacture, properties and agronomic value of fertilizers and fertilizer materials. Latter part covers soil fertility evaluation and use of fertilizers in sound management program. 430 pages, cloth bound **$7.75**

PLANT REGULATORS IN AGRICULTURE
Dr. Harold B. Tukey

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Need for Continued Increase in Farm Efficiency Cited at Southern Session

MEMPHIS—Some 1,200 farm specialists and agricultural leaders attending the 56th annual convention of the Association of Southern Agricultural Workers were told last week the greatest change in American agriculture in recent years has been the change in the farmer himself.

In his presidential address at the general session opening the three-day meeting, L. B. Dietrick, head of the college of agriculture, Virginia Polytechnic Institute, spoke on "research and education—keys to the future." This was the theme of the meeting, which was attended by representatives from 13 states.

"Much of the increased efficiency of the worker has been brought about by improved technology, mechanization and increased know-how," Dr. Dietrick said. "Basic to this, however, has been a change in the attitude of the farmer toward scientific information—from one of mistrust to one of acceptance, to one of seeking such information."

The dean pointed out that one of the dangers of our time is the belief of some that research and education are responsible for surpluses and should be held accountable for most agricultural ills. He added that farmers must continue to improve their efficiency if they are to compete or even survive.

The belief the farmer of today is accepting and seeking information was supported in an address by Dr. Charles Lincoln, chairman of the Cotton States Branch of the Entomological Society of America, to the opening entomology session. The Arkansas entomologist said, "The farmer is capable of making the necessary observations, drawing logical conclusions, of mixing and applying insecticides correctly—provided the entomologist does his job."

Cited as an example of this type of work was the Arkansas insect scouting program. Most farmers learned to do it in scouting schools conducted by county agents.

"Progress was slow at first; but over the years farmers have improved their scouting techniques, their understanding of control recommendations, and their judgments in applying recommendations. This is only one example of farmers doing an effective job of insect control," Dr. Lincoln said.

He pointed out that although paid scouts attract the attention in Arkansas, they are not the most important part of the program. They scout only about 10% of the state's acreage. About 90% of the cotton acreage is scouted, which means that farmers scout 80%.

The speaker said public relations is receiving a lot of deserved attention. "Entomology is rapidly becoming recognized by the general public. Insect control is of increasing importance to our economy. There are more and more entomologists in closer contact with the public. The profession must accept increasing responsibilities."

He added that he believes the future course for practicing entomologists lies in furnishing advice, assistance and leadership to laymen who make the final decisions and carry out the actual practices of insect control.

Describing the effects of physiological changes on the seasonal occurrence of diapause in the boll weevil, Dr. M. E. Merkl, Delta Branch Experiment Station, Stoneville, Miss., said studies indicate some boll weevils get ready to get into the condition to survive the winter as early as July. The significance of this, he points out, is that the normal stalk destruction measures aren't enough. Control measures must be developed to get rid of such weevils in July, August and September.

Another Stoneville entomologist described field tests with insecticides and miticides against insects and spider mites attacking cotton in the area. T. R. Pfrimmer said in the tests Dicapthon at 1 lb., Sevin at 1 lb. and Bayer 29493 at ½ lb. all showed promise for control of boll weevils. The best treatments gave increases in yields of seed cotton per acre of 800 to 900 lb. over the check.

William H. Jackson Named to Spencer Board

KANSAS CITY—Spencer Chemical Co. announced Jan. 29 the election of William H. Jackson of New York City and Princeton, N.J., to the company's board of directors. Mr. Jackson will fill a vacancy on the Spencer board created by the resignation of James F. Brownlee, also of New York.

Kenneth A. Spencer, president of Spencer Chemical, said in making the announcement that "while Mr. Brownlee made a major contribution to the corporation, the company will benefit greatly from the extensive legal and financial experience of Mr. Jackson, who has previously served for six years as a Spencer director."

Mr. Jackson just recently resigned a position as special assistant on President Eisenhower's executive staff. Following a military career as an intelligence officer, he served for one year as deputy director of the Central Intelligence Agency. In addition to his government experience, he has been affiliated as a senior partner with Carter, Ledyard and Milburn, a New York law firm, and as managing director of J. H. Whitney & Co., also in New York.

Other members of the Spencer board include Henry Lee Cooper, Henderson, Ky.; J. E. Culpepper, Kansas City; Milton McGreevy, Kansas City; J. P. Miller, Kansas City; Dr. Franklin Murphy, Lawrence, Kansas; H. H. Spencer, Pittsburg, Kansas; Kenneth A. Spencer, and C. Y. Thomas, Kansas City.

National Potash Elects A. F. Rothwell Treasurer

NEW YORK—Albert F. Rothwell has been elected secretary and treasurer of National Potash Co., announced Richard C. Wells, president.

Mr. Rothwell joined National in 1956 and was elected assistant secretary in 1958. He graduated from Princeton University in 1948 and Columbia University Law School in 1951. Before joining National, Mr. Rothwell was an associate in the law firm of Sullivan & Cromwell.

Overhead Irrigation Boosts Effectiveness of Pre-Emergence Herbicides

WASHINGTON—The efficiency of pre-emergence applications of several weed-killers was greatly increased when followed by overhead irrigation instead of furrow irrigation, according to a U.S. Department of Agriculture scientist.

Experiments at Weslaco, Texas, showed that overhead irrigation increased the downward movement of herbicides into the ¼- to ¾-inch layer of soil, while the chemicals remained on the soil surface following furrow irrigation. The downward movement of the herbicides caused them to come in close contact with germinating weed seeds, resulting in more effective control, USDA said.

Dr. Robert M. Menges of USDA's Agricultural Research Service conducted the research in cooperation with the Texas Agricultural Experiment Station.

The studies comparing the two methods of irrigation were made, he said, because recent field trials indicated that pre-emergence herbicide applications were less effective than desired when followed by furrow irrigation, an important phase of crop production in the Southwest.

Dow Earnings Register Drop from 1957 Total

MIDLAND, MICH.—The Dow Chemical Co. reported sales of $341,881,379 and net income totaling $28,028,844 for the six months period ended Nov. 30, 1958. The net amounted to $1.07 per share of common stock outstanding..

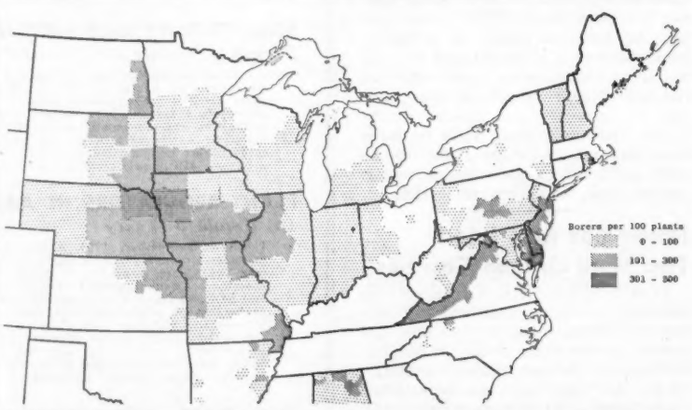
For the same period in 1957, sales totaled $337,203,122 and net income $28,957,241, or $1.12 per share.

Earnings before taxes for the six months were $54,384,743 compared with $57,178,067 reported in 1957. U.S. and foreign income taxes were $26,355,899 as against $28,220,826. Depreciation and amortization were $41,281,000 and $42,090,000 in the comparable period.

NEW DESIGN—A new shipping container has been developed for Summers Fertilizer Co., Inc., McKeesport, Pa., for shipping Kapco fertilizer. The box consists of two full-telescope parts. Two of the bottom flaps meet off-center. Another flap is equal in length to the sides of the box and the fourth has a short tab. When the box is set-up, the full flap is folded parallel inside the box. Next the off-center flaps are folded in and the remaining flap is folded over and the tab tucked in. Then, the full length flap is folded down forming a solid smooth bottom for the poly bag. The top portion is set-up in the same manner. Summers said that in the change to this style of box 175 lb. test corrugated board can be used instead of the 200 lb. test previously required. Gaylord Container Division of Crown Zellerbach Corp. designed the container.

Lime Sales

WASHINGTON—Sales of agricultural lime during November totaled 8,951 short tons, compared with 18,411 short tons in November, 1957, the Bureau of Mines reports. Last November's sales included 3,619 tons of quicklime and 5,332 tons of hydrated lime.



CORN BORER ABUNDANCE—The abundance of corn borers as determined by a U.S. Department of Agriculture survey last fall is indicated on the above USDA map. State agricultural agencies reported on surveys conducted in their states, and the data, summaries and records of field observations were submitted to the Plant Pest Control Division office in Washington. There the national report was compiled. Participating states were encouraged to time the surveys to include a high percentage of mature larvae whenever possible, USDA said.

CORN BORER

(Continued from page 1)

of borers per 100 plants averaged 166, 109 and 83, respectively, compared with 419, 399 and 313 in 1957. The average per 100 plants in North Dakota jumped from 93 to 179.

In the East, populations varied somewhat with increases recorded in Delaware, New Jersey and Virginia, and a decrease in Rhode Island. The average for this group of 11 eastern states reporting was slightly higher than in 1957.

The highest counts in Alabama were found in Marshall County for the second straight year, where the average was 402 borers per 100 plants, compared with 276 in 1957. In Arkansas the highest counts were St. Francis County's average of 184 borers, while in North Carolina, the highest counts were Surry County's average of 132. Generally, however, counts were very low in North Carolina and about the same as 1957 in Alabama and Arkansas.

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Research in the News

Extension soils specialists report that fertilizer helps farmers cut costs of crop production and enables them to boost their business volume without buying additional land.

The soil experts point out that fertilizer applied according to soil tests pays a higher net return than when it is added at lower rates.

A report by agricultural economists at Midwest land grant colleges says that "net returns are highest when a unit of fertilizer will result in an increase in returns just equal to the cost of that unit."

These economists state that present levels of fertilizer use are very low in many Corn Belt states. Additional applications of plant food can produce a large response and higher rates of return.

"In view of the low price of fertilizer in relation to other items going into crop production," they say, "the farmer with a limited amount of capital should consider very seriously the economic advantage of applying fertilizer up to the point where returns are equal to those from alternative uses of capital.

"If you are in doubt as to just where that point is, it is better to apply a little more fertilizer than to put on too little."

The economists say that not all the plant nutrients are removed by a single crop. The carryover effect on the crops that follow is enough to pay the cost of the extra pounds of nutrients added, they report.

●

Soil conservation not only saves the land, but it rewards farmers with higher incomes, according to R. A. Christianson, U.S. Department of Agriculture economist stationed at the University of Wisconsin.

Mr. Christianson lists these benefits farmers have gained from soil conservation: 1—Higher crop yields; 2—Greater net worth; and 3—Increased farm income.

In commenting on Mr. Christianson's statement, the Midwest division of the National Plant Food Institute says that the management practices that promote conservation also build up the soil's fertility level. Such practices include terracing, contour cropping, grass waterways and high forage rotations. Also essential in a good conservation program is the regular use of fertilizer, based on soil tests and on recommendations by state agricultural colleges.

Farmers who build up their soils through careful management can produce crop yields at a lower cost per acre and per bushel, says NPFI. "This means greater net profits. And these increased profits, in turn, can mean a higher living standard for farmers and their families."

●

You are getting more crop growing power in every pound of fertilizer you buy today, reports the Midwest division of the National Plant Food Institute.

Within the past eight years, the plant nutrient content of mixed fertilizer has increased from 28.18% to 38.86% in seven midwestern states, according to NPFI. And in five other Corn Belt states, it has risen from 26.68% to 36.22%.

Commenting on the fact that plant food is one of the farmer's best buys these days, NPFI says:

"As the yield-building power of fertilizer has gone up, the price has remained relatively steady. Economists point out that fertilizer prices have increased less than those of virtually any other item used in crop production.

"Yet fertilizer is most necessary to get top profits per acre."

NPFI says that one of fertilizer's prime values is that it helps farmers cut their costs of crop production. As costs go down, profits go up. Thus farmers and their families get a bigger income per acre, per bushel and per ton from the crops they grow.

●

Though corn has never been considered a major cash crop in Louisiana, farmers are showing increased interest in the production of this crop because of recent increases in livestock production in Louisiana and the development of grain markets within the state.

Scientists tell us that profitable yields per acre can be made by using an adapted hybrid, with proper fertilization, a seedling rate to give an adequate stand and proper cultivation. Most Louisiana farmers can grow 100 bu. per acre by applying about $20 worth of fertilizer. Growers who are already using heavy fertilization and closer spacing plus adapted hybrid seed and shallow cultivation are producing more than three times the state's 1958 average yield of 30 bu. per acre. This average yield is an increase of 10 bu. over the 1956-57 average.

Much effort has been directed toward the development of suitable corn hybrids for Louisiana. An intensive breeding project of 30 years duration has been carried on by the Louisiana State University Agricultural Experiment Station in cooperation with the USDA.

So, farmers who produce corn in 1959 will want to increase yields for greater profits. Get in touch with your county agent. He will supply you with details concerning good cultural practices. Don't be content to be a 30-bushel-per-acre grower.

●

Principles of extending the green feed grazing period for cattle were outlined recently by Roche D. Bush, range conservationist with the U.S. Department of Agriculture.

"With more intensive range management," Mr. Bush stated, "the green feed period can be extended to six months."

"The use of range fertilization and the lana vetch legume will extend the green feed period to nearly double the normal span in the spring," he said, adding that three to five times the normal amount of feed would also be produced.

Mr. Bush was addressing ranchers, agriculturalists, and fertilizer industry representatives attending the Western Range Fertilization Conference held at Redding, Cal. Co-sponsoring the conference were the National Plant Food Institute and the California Fertilizer Assn.

"The major limitation of the annual range is the short green feed period," Mr. Bush stressed. "Unfortunately, most of the annual ranges throughout California dry up at about the same time, gains start to fall off, and large numbers of stock glut the market."

Range fertilization and carefully planned grass seeding were two excellent means of combatting this situation, he added.

Elaborating on the results of range fertilization, Mr. Bush said that results with nitrogen had been the most spectacular, and that responses to phosphorus and sulfur had been equally striking in some cases. He pointed out that a combination of nitrogen, phosphorus and sulfur had been the most consistently successful though.

"This combination," he said, "gives plants the ability to live and grow during frosty weather and provide green feed when unfertilized annuals were not able to produce. We have found it essential also to apply adequately large amounts of fertilizer. It is generally profitable to add more pounds of nitrogen until the increase in dry forage weight produced per acre is about forty times the weight of the nitrogen applied."

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"We can't grow livestock and make a profit from them without good pastures," says W. R. Thompson, extension pasture specialist.

"One of the surest ways I know to get plenty of grass at a fair price is through fertilizing and managing," he added.

He advises farmers to study their farms and decide now the places to apply fertilizer to permanent pastures this fall for next year's spring pastures.

Clover areas will probably be the largest areas fertilized this fall. White clover can be top dressed with phosphate and potash without renovation.

"White clover is a big user of phosphate and potash, so the farmers shouldn't just put out a little fertilizer and expect a lot of clover," Mr. Thompson advises.

Crimson clover, too, whether recently planted or volunteering, should have phosphate and potash applied.

Many times wild winter peas growing in Bermuda are not fertilized at all, he said. These never make the growth that can be expected from fertilized winter peas. Bermuda following fertilized winter peas also makes much better growth than that following unfertilized peas.

●

Well fertilized alfalfa fields have averaged 4¾ tons of forage an acre over a seven-year period, according to Dr. John M. MacGregor, University of Minnesota soils scientist.

Dr. MacGregor says these results were obtained in tests at the Rosemount, Minn., agricultural experiment station. In these tests 300 lb. of an 0-20-20 phosphate-potash fertilizer were applied the spring before seeding. This was followed up by an annual spring application of the same fertilizer. Yields averaged 4.7 tons of forage an acre for seven years.

From Wisconsin comes the report that alfalfa can be grown almost continuously on hilly soils, with intelligent use of fertilizer and the use of productive seed strains.

Dr. Kermit Berger, University of Wisconsin soils professor, says this helps save the more level and fertile soils for growing row crops such as corn, soybeans, wheat, oats and barley.

Present alfalfa yields are less than half of what could be produced in Wisconsin if farmers followed the recommendations of the agricultural college and experiment stations, Dr. Berger says.

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The pink bollworm and the boll weevil still rate as the number one insect combination that cost the nation's cotton growers almost unbelievable sums in lost profits.

Robert W. Lauderdale, extension entomologist, Max C. Fleischmann College of Agriculture, University of Nevada, who recently returned from Houston, Texas, said that in the last 46 years, enough cotton has been lost to the cotton boll weevil alone to provide two dozen handkerchiefs for every man, woman, and child in the nation. Baled and placed end to end, he said, this cotton would reach two and a third times around the world.

Mr. Lauderdale attended the 12th annual national conference of cotton insect control.

The conferees outlined plans for additional research that would strive for control of both insects. There is presently only 4-cents spent on research for each $100 damage.

According to the entomologist the boll weevil does not occur in Nevada. The pink boll worm, however, is a potential invader.

Mr. Lauderdale attended the weeklong conference with entomologists from the South and Southwest to obtain information concerning the latest research, new materials, techniques, and equipment designed for the control of all cotton insects.

AWARD WINNER — The National Fertilizer Solutions Assn., Chicago, has conferred its Award of Merit on Walter S. Colvin (left), director of agricultural sales for Nitrogen Division, Allied Chemical Corp., New York. Making the award is R. E. Crouse, Liquid Fertilizer Corp., Liberty, Ind., a former president of the association. Mr. Colvin, who is the first person to receive the new award, was cited for his work in helping to organize the association. He was also recognized for his technical accomplishments in conducting field experiments with nitrogen solutions and for his educational work in acquainting farmers with nitrogen fertilizer.

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FARM PROBLEMS MULTIPLY . . .

Surpluses Continue a Problem as Industry Studies Business Prospects for New Season

AS DEBATE continues about changes in the government's farm program, it appears increasingly difficult to ascertain just what road should be followed. Some voices clamor for changes—others just as stridently call for maintaining the type of program now in operation.

Responsible people in both the fertilizer and pesticide industries realize that even though some aspects of the current situation may not be conducive to booming sales, the long term prospects are certainly good. The irreversible technological revolution in which plant food applications and the increased use of pesticides play such an important part has demonstrated to many thousands of farmers that these products will pay whether the number of acres involved is large or small.

Dr. Russell Coleman, executive vice president of the National Plant Food Institute, has reiterated many times that farmers can lower their unit of cost so much that they can actually grow less and keep their income at an even level through the use of these chemical aids. Others in experiment stations across the country have also pointed out these economic facts with numerous examples.

But whither the farm program? That question is far from being resolved, but there are many comments concerning it. Ezra Taft Benson, Secretary of Agriculture, long an outspoken advocate of less governmental interference on the farm, declares that if farmers had more freedom and less interference from government, "their production adjustment over the years would have been more realistic; farm markets would have been larger; farm costs per unit of output could have been lower; agriculture would be on a sounder basis; and this year's agricultural budget would be smaller."

Regardless of how one looks at the surplus situation and with what seriousness he views its significance, the facts are real stoppers. Here are some figures quoted by the Secretary recently:

Harvested wheat acreage has been cut by 20 million acres since 1949; yet, by July, 1960, the carryover of wheat will be about 1½ billion bushels—enough to supply normal domestic requirements for 2½ years. The government still has $3½ billion tied up in wheat alone.

The old corn program was described by Mr. Benson as being "so unrealistic that last year only one corn acre out of eight was farmed in compliance with the program."

While the U.S. priced products out of old-time markets, competitors at home and abroad used our price umbrella to expand production and move in. The result has been a piling up of surpluses followed by further cutbacks in output. Cotton and tobacco are examples. U.S. cotton used to hold 60% of the world market; now, even with export subsidies, the share is only 30%. The world's largest tobacco market used to be in North Carolina; now it's in southern Africa.

By next July the U.S. will have more than $9 billion of surplus commodities in government inventory and under loan. The cost of storage and interest on these government stocks will be $1 billion a year.

When the government take-over from last year's crops is completed, the government will have acquired, since January, 1953, some 25 million bales of cotton (more than twice as much as the total crop last year); 2.7 billion bushels of corn (more than 70% as much as the record 1958 crop); 2.5 billion bushels of wheat (more than the 1957 and 1958 crops combined).

Expenditures of the U.S. Department of Agriculture this fiscal year are now estimated at $7.3 billion, of which about $5 billion is for programs for stabilization of farm prices and farm income. The expenditures, of course, do not benefit farmers alone, but the public is concerned over the size of the budget for agriculture.

Less than one third of the farms account for by far the greater part of the price support outlays. About one fourth of the cotton farms have three fourths of the acreage allotments. Two fifths of the farms with wheat allotments have nine tenths of the allotted acres. Thus support programs, while designed originally for small family farms, have resulted in huge expenditures for a few products produced primarily on a relatively few larger, mechanized farms.

The average person eats about 50% more beef, about twice as much chicken, 2½ times as much turkey meat as he did 20 years ago. He consumes 60% more citrus than he did 20 years ago. But, he eats 26% less wheat flour and 15% less wheat cereals.

The recital of such figures is eloquent of its own sheer weight. We wish an easy answer were available, but the problems are so deeply entangled with political overtones and other complicating factors that one can hardly expect to see a real solution for a few years yet.

Tax Dollars Help Maintain Government Competition

ONE OF the most absurd situations we know about, particularly at this time of year as citizens bestir themselves grudgingly to pay their income taxes, is the extent to which the government has entered into business in competition with private enterprise.

Some 19,000 businesses are reported to be operated presently by the government in direct competition with private tax-paying companies. And do these government-run firms add revenue to the public coffers by under-selling private businesses? The answer is a resounding "No". On the contrary, these operations lose a total of a good many billions of dollars a year, amounting to nearly the total amount paid in all the personal income taxes of the nation.

The defense department alone accounts for 2,500 of these businesses in 47 different fields, including the ownership and operation of 150 ice cream plants.

The fertilizer industry does not have to be reminded of government operations in its field. Business men in this industry, as well as those of other fields where similar competition exists, are aware that at least some of the dollars they turn in as taxes will be allocated to bolster this type of competition against them.

As we say, it is absurd. We are sure that many in the trade will agree.

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MEETING MEMOS

Feb. 16-26 — Idaho Dealers' Days: Feb. 16, Caldwell; Feb. 17, Twin Falls; Feb. 18, Pocatello; Feb. 19, Rexburg; Feb. 25, Coeur D'Alene, and Feb. 26, Lewiston.

June 29-30—Seventh Annual California Fertilizer Conference, University of California campus, Davis, Cal. J. H. Nelson and Earl R. Mog, co-chairmen.

Oct. 14-16—Pacific Northwest Plant Food Assn. Annual Convention, Chinook Hotel, Yakima, Wash.

Meeting Memos listed above are being listed in this department this week for the first time.

Feb. 10-12 — Agricultural Chemicals Conference, sixth annual meeting, Texas Technological College, Lubbock, Texas.

Feb. 12-13—Midwestern Agronomists.

Feb. 11-13—Pennsylvania Lime & Fertilizer Conference, Pennsylvania State University, University Park, Pa.

Fertilizer Industry Representatives, 11th annual meeting, Edgewater Beach Hotel, Chicago, Ill., sponsored by National Plant Food Institute.

Feb. 13—National Safety Council, executive committee of the fertilizer section, winter meeting, Heart of Atlanta Motel, Atlanta, Ga.

Feb. 13-18 — Maryland Agricultural Pesticides Conferences; at Salisbury State Teachers College Feb. 13, La Plata Feb. 16, and Frederick Feb. 18.

Feb. 16-17 — Southwestern Branch, Entomological Society of America, Annual Meeting, Adolphus Hotel, Dallas, Herman Meadows, Diamond Alkali Co., 1006 Main St., Houston, Secretary-Treasurer.

Feb. 16-19—Pennsylvania Turf Conference, Pennsylvania State University, University Park, Pa.

Feb. 16-17 — Montana State Fertilizer Dealer School, Great Falls, Mont., Civic Center.

Feb. 18-20—Midwestern Chapter of the National Shade Tree Conference, 14th annual meeting, LaSalle Hotel, Chicago, Noel B. Wysong, secretary.

Feb. 24—Western Washington Fertilizer Dealers Meeting, N. W. Washington Experiment Station, Mt. Vernon, Wash.

Feb. 24-25—Alabama Pest Control Conference, Alabama Polytechnic Institute, W. G. Eden, Secretary-Treasurer, Alabama Association for Control of Economic Pests, Alabama Polytechnic Institute, Auburn, Ala.

March 4-5—Annual Weed and Insect Conference, Fonner Park, Grand Island, Neb.

March 17—Western Agricultural Chemicals Assn. spring meeting, Hotel Miramar, Santa Barbara, Cal. C. O. Barnard, executive secretary.

March 19-20—Oregon Feed and Seed Dealers Assn., annual convention, Multnomah Hotel, Portland, Ore.

March 25-27—North Central Branch, Entomological Society of America, Annual Meeting, Neil House Hotel, Columbus, Ohio, C. W. Wingo, 102 Whitten Hall, University of Missouri, Columbia, Secretary-Treasurer.

June 9-10—Seventeenth Annual Convention of the Association of Southern Feed and Fertilizer Control Officials, Velda Rose Motel, Hot Springs, Ark.; Maurice Rowe, Virginia Department of Agriculture, 1122 State Office Bldg., Richmond 19, Va.

June 14-17—National Plant Food Institute, Annual Convention, the Greenbrier, White Sulphur Springs, W. Va.

July 7-9—Regional Fertilizer Conference, co-sponsored by the Pacific Northwest Plant Food Assn. and state colleges and universities in the area, Winthrop Hotel, Tacoma, Wash.

Nov. 4-6—Fertilizer Industry Round Table, Mayflower Hotel, Washington, D.C. Dr. Vincent Sauchelli, National Plant Food Institute, chairman.

Nov. 16-20 — National Aviation Trades Assn., 20th annual convention, New Orleans, La.

American Ag Chemical Elects Two New Directors

NEW YORK—The American Agricultural Chemical Co. announces two changes in its board of directors, with the retirement from the board on Jan. 27, of George H. Fick and Arnold W. Cramer.

John A. Marsh, vice president, the International Nickel Co., Inc., and W. H. Hildebrandt, comptroller, the American Agricultural Chemical Co., were elected to replace the two retired directors.

FERTILIZER SALES UP

CLEMSON, S.C.—B. D. Cloaninger, director, Fertilizer Inspection and Analysis, School of Agriculture, Clemson College, reported that fertilizer sales in South Carolina for the six months ending Dec. 31, 1958, were 17,328 tons more than the similar six months in 1957. The totals were 134,202 tons for the 1958 period and 116,874 tons for the 1957 period. Most popular grades were 4-12-12, 3-12-12 and 4-10-6.

CALENDAR FOR 1959-60

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Ralph Wall

Ralph Wall Joins Pacific Coast Borax

LOS ANGELES—The Pacific Coast Borax Company Division of U.S. Borax & Chemical Corp. has announced the appointment of Ralph Wall to its agricultural sales department in Jackson, Miss. Mr. Wall replaces J. M. Nunn, recently transferred to the Los Angeles office as a marketing specialist in the agricultural sales department.

Mr. Wall will cover the tri-state area of Arkansas, Louisiana and Mississippi for the company. He will handle sales of borate herbicides for agricultural and industrial use.

MOVES OFFICES

MEMPHIS, TENN.—Archer & Woodbury, Memphis advertising and public relations agency, announced that it had moved its offices to the DuPont Building, 22 S. 2nd St., in Memphis.

Classified Ads

Classified advertisements accepted until Tuesday each week for the issue of the following Monday.

Rates: 15¢ per word; minimum charge $2.25. Situations wanted, 10¢ a word; $1.50 minimum. Count six words of signature, whether for direct reply or keyed care this office. If advertisement is keyed, care of this office, 20¢ per insertion additional charged for forwarding replies. Commercial advertising not accepted in classified advertising department. Display advertising accepted for insertion at minimum rate of $11 per column inch.

All Want Ads cash with order.

HELP WANTED

FERTILIZER SALES MANAGER — Established multi-plant fertilizer company, central states area, wishes to employ man 30 to 45 who has fertilizer sales experience for position of plant sales manager. Send background resume with recent photograph. All information confidential. Address Ad No. 4501, Croplife, Minneapolis 40, Minn.

MULTIWALL BAG SALESMEN

Experienced men needed by old established company to open new territories in Southeast and Southwest. Liberal salary, bonus and benefits. Write full particulars in strict confidence. Address Ad No. 4500, Croplife, Minneapolis 40, Minn.

MISCELLANEOUS

BRUSH AND WEED KILLER

KILL SUBMERSED water weeds which foul up motor propellers, tangle fishing gear and choke irrigation ditches with R-H Granular Weed Rhap. Inexpensive, easy to use, sure results. For details write Reasor-Hill Corporation, Box 36CL, Jacksonville, Ark.

KILL BRUSH at low cost with amazing R-H Brush Rhap. Will not injure grasses, grains, cattle, or other animals. See your dealer, or write Reasor-Hill Corporation, Box 36CL, Jacksonville, Ark.

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Raymond Bag Co. .....
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Swift & Co. .....

Tennessee Corp. .....
Texas Gulf Sulphur Co. .....

Union Bag-Camp Paper Corp. .....
U. S. Borax & Chem. Corp. .....
U. S. Industrial Chemicals Co. .....
U. S. Phosphoric Products Division .....
U. S. Potash Co. .....
U. S. Rubber Co., Naugatuck Chem. Div...
U. S. Steel Corp. .....

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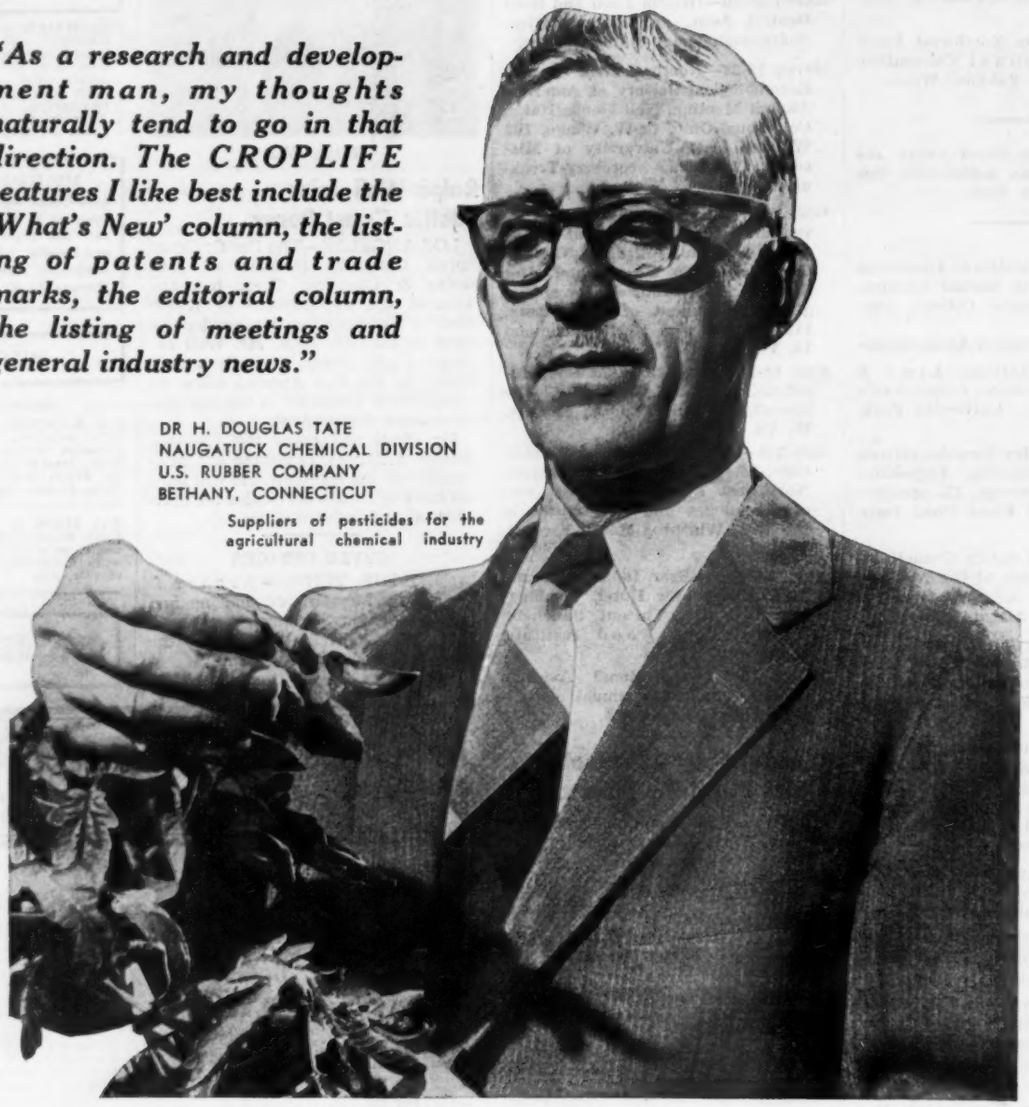
DR H. DOUGLAS TATE
NAUGATUCK CHEMICAL DIVISION
U.S. RUBBER COMPANY
BETHANY, CONNECTICUT

Suppliers of pesticides for the agricultural chemical industry



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